

**THE  
RAILWAY GAZETTE**

A Journal of Management, Engineering and Operation  
INCORPORATING

Railway Engineer • TRANSPORT • The Railway News  
The Railway Times • Herapaths Railway Journal • RAILWAY RECORD.  
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## CONTENTS

	PAGE
Editorials .. .. .	129
Letters to the Editor .. .. .	134
The Scrap Heap .. .. .	136
Overseas Railway Affairs .. .. .	137
The Western Desert Railway .. .. .	139
Electric Traction Section .. .. .	145
Saddle-Tank "Austerity" Locomotive .. .. .	146
Railway News Section .. .. .	147
Personal .. .. .	147
Transport Services and the War .. .. .	149
Stock Market and Table .. .. .	156

## DIESEL RAILWAY TRACTION SUPPLEMENT

The February issue of THE RAILWAY GAZETTE Supplement, illustrating and describing developments in Diesel Railway Traction, is now ready, price 1s.

## GOODS FOR EXPORT

The fact that goods made of raw materials in short supply owing to war conditions are advertised in this paper should not be taken as indicating that they are available for export

## POSTING "THE RAILWAY GAZETTE" OVERSEAS

We would remind our readers that there are many overseas countries to which it is not permissible for private individuals to send printed journals and newspapers. THE RAILWAY GAZETTE possesses the necessary permit and facilities for such dispatch.

We would emphasise that copies addressed to places in Great Britain should not be re-directed to places overseas

## REDUCTION IN SIZE OF PAGE

To economise in paper our readers will observe a slight reduction in the size of THE RAILWAY GAZETTE in that the size of the page has been reduced from 9 in. x 12 in. to 8½ in. x 11½ in. The type area of the page remains the same, namely, 7 in. x 10 in., but the surrounding margins have been reduced. This of course detracts from the appearance of the paper, but is one of the exigencies of the war

## TO CALLERS AND TELEPHONERS

Until further notice our office hours are:

Mondays to Fridays 9.30 a.m. till 5 p.m.

The office is closed on Saturdays

## ANSWERS TO ENQUIRIES

By reason of staff shortage due to enlistment, we regret that it is no longer possible for us to answer enquiries involving research, or to supply dates when articles appeared in back numbers, either by telephone or by letter

## ERRORS, PAPER, AND PRINTING

Owing to shortage of staff and altered printing arrangements due to the war, and less time available for proof reading, we ask our readers' indulgence for typographical and other errors they may observe from time to time, also for poorer paper and printing compared with pre-war standards

## Post-War Diplomats and Civil Servants

WITHIN the last week the Government has announced far reaching proposals which may lead to the reform of the diplomatic and consular services, and also the Civil Service. At first sight it would appear that the changes which at long last the Government proposes to make are in line with suggestions that have been made from time to time by many who feel that members of the personnel of the services concerned are too often unfitted for the industrial and commercial responsibilities, which at times they have to carry. A White Paper presented by the Foreign Secretary, in the House of Commons on January 27, outlined a system of recruitment which would facilitate the entry from any social sphere, of candidates with suitable qualifications and enable them to obtain the necessary vocational training at the expense of the State. The Foreign Office and Diplomatic Service would be amalgamated with the Commercial Diplomatic Service and the Consular Service. The objects of the amalgamation into an organisation, which is to be known as the Foreign Service, are: wider training and experience; the introduction into diplomatic posts of men with understanding of other than purely political questions and especially those relating to social and economic matters; a less sheltered life for diplomats; larger choice of men for any particular post; and improvement in the lot of Consuls by giving all men the chance of political work and service in capitals and opportunity of reaching the highest positions. An important feature of the training is that the personnel will secure a grounding of economic, commercial, and social questions. Due weight is to be given to the claims of character and personality of candidates as distinct from mere ability to pass written examinations.

## Civil Service Training

In the House of Commons, on January 28, there was a debate on the 16th report of the Select Committee on National Expenditure dealing with the organisation and control of the Civil Service. The committee's inquiry had been directed in the main to see the kind of machinery that existed in the Government to ensure that efficiency was maintained. The main criticism as to recruitment of the Civil Service was that too much stress was laid on academic qualifications. The committee recommended that the best people of all kinds should find a road to the highest posts and in recruiting for these posts men trained in the school of experience as well as those with academic qualification should be borne in mind. Sir Kingsley Wood replied to the debate and dealing with the suggestion for a Civil Service Staff College, said that the time had come when the preparatory work could begin. He proposed to put in hand at once an investigation into the general question of the training of Civil Servants, including the establishment of a staff college and its particular form and character. Sir Alfred Beit raised the criticism that Civil Servants were virtually irremovable, and that if a sufficiently important or obstructive Civil Servant existed in one department, the only way to deal with him was either to promote him or to remove him to hold up business in another. (Is not this criticism equally applicable to the railway service?) In exchange for that security and pension rights, the Civil Service accepted a lower rate of pay than in corresponding employment outside. The effect was that the nation would get Government service at a cut price, but had to pay for it by having to tolerate a certain degree of incompetence.

## Cheap Tickets and the Last War

Before the outbreak of war in 1914 the issue of cheap tickets by the various British railway companies, for use by both special and ordinary train services, had reached enormous proportions. As the result of the heavy demands on the railways during that war in connection with the conveyance of munitions and H.M. Forces, coupled with the depletion of railway staffs and rolling stock, the railways were compelled to conserve their resources by restricting travel, and one of the early measures taken to effect this was the suspension of many excursions and other cheap travel facilities. The first general withdrawal was made on February 22, 1915, and included the suspension of bookings for day and half-day excursions, guaranteed excursions, walking and cycling tours, and football matches. The second and final general step was taken on March 29, 1915, when the remaining excursion and cheap-fare facilities (with certain exceptions) were withdrawn by order of the Railway Executive Committee. Included in the exceptions were market tickets, tourist tickets (which were withdrawn, however, in April, 1916), and cheap tickets to theatrical parties. Generally, the principle of reduced or free railway facilities during the war was confined to:

(a) members of H.M. Forces, (b) organisations recognised by Naval and Military authorities, (c) societies directly concerned with the furtherance of national interests, and (d) individuals whose livelihood depended mainly on their travelling by rail. It was subsequently agreed to restore, to a limited extent, the weekend facilities to married munition workers employed in factories away from their homes. The arrangement provided for a special number of vouchers to be placed at the disposal of the Ministry of Munitions every week for distribution among the workers affected. It was not until January 1, 1917, that any alteration was made in ordinary train fares, but on that date an all round increase of 50 per cent. was made in the fares of each class under powers granted by an Order in Council. The avowed object of this increase was not to supply additional revenue for the railways, but to restrict travel by passenger trains.

### Overseas Railway Traffics

Notwithstanding the undoubtedly heavy burden of working expenses there was something of a rally last week in the prices of Argentine railway stocks, aided by the continuance of traffic increases except on the Buenos Ayres Western. In the 29th and 30th weeks of the present financial year the gains in receipts have been:—Buenos Ayres Great Southern £67,080, Central Argentine £65,952, Buenos Ayres & Pacific £30,780, Entre Rios £5,976, and Argentine North Eastern £2,274. The Buenos Ayres Western net decrease in the two weeks is only £2,400. By recent good takings the Central Uruguay Railway at the end of the 30th week of the financial year is £28,785 ahead. Among Brazilian railways the Great Western in the first 23 days of this year has secured an increase of £11,500 in receipts, but the Leopoldina for the same period is £3,483 down. A decrease of £3,162 is shown by the San Paulo in the first 17 days of 1943.

	No. of week	Weekly traffics £	Inc. or decrease £	Aggregate traffic £	Inc. of decrease £
Buenos Ayres & Pacific*	30th	112,200	+12,500	2,785,620	+375,540
Buenos Ayres Great Southern*	30th	198,540	+30,960	4,476,780	+348,060
Buenos Ayres Western*	30th	54,960	-3,180	1,560,420	+66,660
Central Argentine*	30th	145,644	+35,724	3,850,635	+687,000
Canadian Pacific	3rd	850,600	+19,000	2,581,800	+275,200

\* Pesos converted at 16 to £

A continuance of the excellent traffics of the United of Havana in the 29th and 30th weeks of the financial year has brought its aggregate receipts to £1,343,328, an improvement of £763,455.

### Railways and Scientific Research

In our January 1 issue, on page 5, we commented on the progress which had been made in recent years by the British railways in the matter of the application of scientific research to a number of their problems. Sir Felix Pole, one-time General Manager of the G.W.R., now Chairman of Associated Electrical Industries, has always been interested in this matter. As was recorded in our issue last week, recently he has been appointed Chairman of the Industrial Grants Committee of the Department of Scientific & Industrial Research Advisory Council. It may be recalled that in October, 1929, in a paper read before the Great Western Railway (London) Lecture & Debating Society, of which he was President, although he had then left the company; he said that in reflecting how far things that were done outside might be done on the railway, the first idea which had struck him was a research department. He felt that there was room for an organised research department for the railways, and suggested that its value should be judged by results, after stating specific problems, such as "how to increase the capacity for a certain line." He gave as an example the Electrical Research Department at Trafford Park, Manchester, of his own company, which he described as "a department full of very highbrow scientists, but regarded as a friendly ally by all other sections of the industry." How far Sir Felix Pole's prescience has been justified may be judged by the results we enumerated in our recent article.

### Rail and Canal Grain Handling

By means of a grain conveyor recently installed at an L.M.S.R. station and the wharf of an adjoining canal, 30 tons of loose wheat can be discharged in an hour from specially-constructed grain vans to barges. Previously, this grain traffic passed by water throughout from East Coast ports to the mills on the canal, but, by the combined use of rail and canal transit, it can now be drawn from either East or West Coast ports, a vital stand-by in the event of any port of entry suffering damage through enemy action. The grain is worked from the port by special trains of 22 hopper vans. The trains are drawn alongside the conveyor shed, and the vans are then capstanned, three at a time, into the shed. The hoppers are unlocked and opened and

the grain pours down from the vans through three apertures on to an enclosed chain-conveyor and travels thence for 265 ft., where it is discharged into the well of barges lined up ready in the canal basin. The barges then effect delivery to silos along the canal route. Only six hours are required from the arrival of the loaded special train to its departure, empty, for a further load from the docks.

### U.S. Transportation Corps in Great Britain

In the absence of Major-General John C. H. Lee, Commanding-General of the Services of Supply, U.S. Army, European Theatre of Operations, Colonel N. A. Ryan, Acting Chief of Transportation Corps of the U.S. Army in this country, delivered an address which had been prepared by General Lee, to the Institute of Transport in London on Tuesday. Colonel Ryan was particularly well fitted to address a meeting of this kind, for in civilian life he is General Manager of the Chicago, Milwaukee, St. Paul & Pacific Railroad (Lines West). He explained the organisation and functions of the Services of Supply in the American Army, and the part which the Transportation Corps played in them. The Transportation Corps was responsible for providing all transport which might be required, and to this end it had marine, railway, and other sections. Colonel Ryan said that in this country at certain important points all shunting was being done by Americans. For the first time in history an American crew had driven a train on the main-line railways of this country. The locomotive was one of those which had been built in America, but the wagons were British. As examples of co-operation between the two countries, Colonel Ryan referred to the manufacture of locomotives in the United States to the design of the British Ministry of Supply, and said that the wagons also were being built in America and then shipped to this country for re-erection. He also referred to a special breakdown-locomotive which had been required in this country, and which had been constructed at a L.P.T.B. works in 11½ days, by workers who had stayed at the job in shifts for 24 hours a day.

### Some Current Permanent Way Topics

It is customary for the retiring President of the Permanent Way Institution to deliver an address at the annual winter meeting on matters concerning his views and experiences. Sometimes a specific subject is chosen, and sometimes a variety of matters is considered. On Saturday last, at the meeting of which we give a brief report at page 152, Mr. F. E. Harrison, O.B.E., chose the latter course, and made comments on several items of considerable interest, and some which may long remain the subject of controversy. One of his avowed objects was to submit topics which might be discussed further in the various Sections of the P.W.I., and he certainly achieved this, insofar as he touched upon ten subjects, every one of which is capable of useful consideration in the light of different experiences and practice. They were, respectively, the recording of broken rails; details of a recent case of a broken rail resulting in the derailment of a passenger train (Tweedmouth, December 18, 1941); the retention in running lines of 50-year-old rails; bolted and other track; programming the work of track maintenance and recording results; the construction of level crossings; spring vee crossings; stop-gaps for fencing; spot sleepers; and the felling of an arch. Incidentally, on more than one occasion, Mr. Harrison made reference to the columns of THE RAILWAY GAZETTE during the past year.

### Broken Rails

We believe it to be well recognised that the number of rails found broken on railways in Great Britain is smaller than in other countries, and this is presumably mainly because the British railways are prepared to pay the price for a more exacting specification than elsewhere. In normal times, the railway companies are required to report to the Ministry of Transport the fracture of a rail broken in the permanent way of a passenger railway. The fractured rails reported are whole section rails which have become completely severed. Thus, a fracture through the planed part of a switch, for instance, is not reportable. There are doubtless some differences in interpretation, but Mr. Harrison said that these were probably not wide, and broadly, the returns of the companies in numbers compared with mileage were not dissimilar. Over a recent 10-year period, they amounted to 29 broken rails a year for every 10,000 miles of running line. On the North Eastern Area of the L.N.E.R., analysis of the 126 fractures over ten years showed that 28 per cent. were within 24 in. of the joint; 29 per cent. occurred at holes drilled for fishing or other purposes; and 31 per cent. concerned rails in points and crossings, of which 17 per cent. were through a crossing wing rail.



### One-Man Locomotive Operation

On August 18 last, the conductor and brakeman of a petrol-electric railcar travelling over the 129-mile Mandan and Mott branch of the Northern Pacific R.R. noted that the car was about to pass the station at Solen, at which they were booked to stop, at full speed. The conductor thereupon applied the emergency brakes, and having brought the car to a stand, discovered that the driver was not in the driving compartment. The car was then reversed, and after it had travelled to a point  $5\frac{1}{2}$  miles west of Solen, the driver's body was found on the bridge over the Cannonball River. Evidently he had been leaning out of the side window of his driving compartment, and his head had struck the first girder of the river bridge, as a result of which his body was dragged out of the car and dropped on to the bridge floor 40 ft. away. From here the car had travelled driverless until pulled up by the conductor at Solen. Much is being made by the railwaymen's unions as to the dangers thus suffered by the travelling public due to the operation of passenger and freight trains, powered by petrol-electric or similar locomotives, with only a single man in the cab. The reason for such operation, of course, is the necessity for economy in the working of branches which carry only a light traffic, and which, apart from such economy, would be heading direct for abandonment, as has been the case with so many thousands of miles of similar lines in the United States in recent years. Where such one-man operation is essential, however, it would appear to be the duty of the railway concerned to fit this type of locomotive with a dead-man's handle device, or some similar form of safety control, to guard against risks arising out of accidents to or the sudden illness of drivers.

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### Saddle-Tank "Austerity" Locomotives

Although the 2-8-0 mixed traffic "austerity" locomotives, British and American, which have been described in this journal, can be expected to handle traffic of all kinds under a great variety of conditions, it is obvious that on account of their size and power, they would be wasteful if engaged in shunting and train-marshalling duties. For this class of work the Ministry of Supply has now ordered some 0-6-0 saddle tank locomotives to a design that is based on a well-known industrial type. As far as possible standard parts are used to save tooling up for fresh ones, but the opportunity has been taken to incorporate austerity features where a saving could be effected thereby of labour or of materials in short supply. Once again steel castings have been almost entirely avoided; use has been made of welding to build up many relatively complex parts. Special care has been taken in designing the component parts of the "chassis" and in fitting them together so that the resulting structure might be one of exceptional rigidity. It is to be expected that these engines will survive the roughest treatment and be available for operations under the most difficult conditions. We are indebted to the Ministry of Supply for the details given in the description of these engines on page 146 of this issue.

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### American Locomotive Power

One reason why American railways are handling their heavy wartime traffic with far fewer locomotives, in proportion to tonnage hauled, than during the last traffic peak, is the increase which has been brought about in the last decade in the power and efficiency of individual locomotive units. In this increase articulation has played a large part. The Union Pacific Railroad in 1936 took delivery of the first 15 of a series of 4-6-6-4 locomotives designed to operate fast freight-services through mountain territory; 25 more were delivered in 1937; and a further 20, of an improved type, making 60 in all, just have been completed. These are in addition to the considerably larger 4-8-8-4 locomotives of the so-called "Big Boy" type introduced by the same company about the end of 1941. The latest 4-6-6-4 engines are designed to operate over gradients as steep as 1 in 33 and round curves as sharp as  $4\frac{1}{2}$  ch. radius, despite their total engine wheelbase of 60 ft. 4 in.; it is also a measure of the speed of modern American freight service that these locomotives are designed to work continuously at maximum horsepower output at speeds of up to 70 m.p.h. The builders of this latest Union Pacific series of 280-ton locomotives (435 tons with tender) have 155 of the same general type and dimensions either completed or on order. Another aid to increased availability and efficiency has been modernisation, such as that which the Missouri Pacific Railroad has applied lately to 25 5 ft. 3 in. 2-8-4 freight locomotives, which, after only ten years of service in their original form, have been converted into 6 ft. 3 in. 4-8-4 locomotives of a much more efficient type for mixed-traffic operation. As a result, 23 engines, which were averaging 4,580 miles each a month, now are more than doubling that figure with an average of 9,250 miles a month, which is a daily average of over 300 miles in fast and heavy American freight-operating conditions.

### Record Year for Canadian National System

IN a recent review of the work accomplished by the Canadian National Railways during 1942, Mr. R. C. Vaughan, Chairman & President, indicated that new traffic records were created for each month and the volume of traffic during the year exceeded by a wide margin all previous records. The following figures indicate the growth of traffic since the outbreak of war as compared with 1928 which was the pre-war peak year:—

Year	Freight traffic in millions of ton miles	Passenger traffic in millions of passenger miles
1928	23,041	1,541
1939	17,084	875
1940	21,532	1,125
1941	27,200	1,762
1942 (estimated)	32,000	2,650

The record volume of traffic dealt with is reflected in the financial results as operating revenues in 1942 are expected to exceed \$370 millions and after meeting all operating expenses, including equipment depreciation, and appropriate charges for deferred maintenance and renewals, net revenue will exceed \$85 millions, an all-time record. This net revenue will be sufficient to pay taxes and all other charges, including interest due to the public and to the Government, and leave a substantial surplus to be paid to the Government. The figures below give a comparison of the estimated net revenue for 1942 compared with the three preceding years:—

	1942 Estimated	1941 Actual	1940 Actual	1939 Actual
Operating revenues	\$370,000,000	\$304,376,778	\$247,527,224	\$203,820,186
Operating expenses	285,000,000	237,768,437	202,519,812	182,965,768
Net revenue	85,000,000	66,608,341	45,007,412	20,854,416
Operating ratio	77.02%	78.12%	81.82%	89.77%

It is noteworthy that although the traffic dealt with in 1942 was 44 per cent. greater than in 1928, it was handled with 8.6 per cent. less staff, 25.9 per cent. less freight cars, 14.2 per cent. less passenger cars, and 6 per cent. less locomotives than in 1928. Further, the fuel consumption in 1942 was 45,000 tons less than in 1928, a truly remarkable achievement. So far, the railway industry in Canada has been able to meet the ever increasing demands for transport despite increasing difficulties which are being experienced in obtaining the necessary equipment. Apart from their strenuous efforts in meeting transport requirements, the Canadian National Railways are actively engaged in the manufacture of munitions for the Government, including the construction of minesweepers, corvettes, and cargo vessels, and many of their experienced officers and men have been freely loaned to the Government for war purposes. The Canadian National system is the largest railway on the North American Continent, or in the British Empire, and over 10 per cent. of its 101,000 employees are now serving in the Armed Forces or Merchant Marine. The vital role played by this great organisation in the economic and social life of Canada is self-evident and during the past year it has also become abundantly clear that the Canadian railways are the only agency capable of providing land transport on the scale necessary to meet war requirements—a situation which parallels the experience of the railways in Great Britain.

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### War Advance Claim by Senior Railway Staff

WE are disappointed to learn that there is little likelihood of the Chancellor of the Exchequer agreeing to the extension of the war advance to members of the railway staff who are receiving salaries of between £500 and £1,000 a year. Having regard, however, to the existing practice in commercial and industrial circles in this connection, such a decision is very difficult to understand. The facts are worthy of recapitulation: the staff concerned—who number only about 1,500 out of something like 640,000—include senior shop-foremen, controllers, stationmasters, and goods agents at the largest stations and depots, technical and clerical staff, and divisional and junior officers. Most of them are working considerably longer hours than they did in peacetime: many of them are now working on Sundays, and since the outbreak of war very few of them have been able to take anything like the period of yearly leave to which they are entitled. Yet the staff earning up to £500 a year regularly receive payments for overtime and Sunday duty, which in a number of cases are known to average between £100 and £200 a year and, in addition, receive payment for annual

leave which they are unable to take, together with the war advance which now stands at £41 12s. per annum.

At the forthcoming annual meetings of railway stockholders the chairmen will doubtless give some indication of the enormous task which the railways have performed so adequately and with so little publicity during 1942. The financial results alone will be indicative of the manner in which the railway staff generally have met every demand, and it will be abundantly clear to those with any knowledge of railway organisation that the pre-war responsibilities of the senior section of the staff must have been very greatly enlarged and extended by reason of the vastly increased tonnages conveyed, to say nothing of the difficulties arising from war conditions. It is also the fact that the incidence of income tax bears more heavily on this section of the staff, due to their pre-war financial commitments, than it does upon those in the lower range of salaries.

In the light of these facts the extension of the war advance to all railway staff receiving salaries over £500 a year would, in our view, be an act only of bare and delayed justice. Moreover, for those who abide by precedent, such a step would not create a precedent. Since this reasonable concession is apparently to be denied by the Chancellor, we earnestly hope that the railway managements will themselves find some means of adjusting this glaring anomaly within the scope of their own resources. There would obviously be some objections to adopting the principle of payment for overtime and Sunday duty to the senior staff, but we suggest these might not apply to the extension to them of an arrangement somewhat on the lines of the aggregation allowances which are made to certain railway officials in lieu of overtime and Sunday duty. There are doubtless other ways in which justice could be done, and we hope that the railway managements will find it possible to achieve the desired end and make any such decision retrospective to a reasonable date seeing that the claim has been pressed continuously but unsuccessfully since May, 1941.

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### Improved Lighting on Trains

FOR some time there has been a regrettable tendency for Government Departments to let their zeal for giving publicity to decisions on important matters of public interest far outrun discretion when consideration is had to the time likely to be required for carrying out such decisions. A typical case is that of lighting in railway trains. Largely because of agitation by a certain section of the Press, the Ministry of Home Security announced on January 19 that, except in certain areas, improved lighting would be provided in railway trains which, in general, should allow for passengers to read in reasonable comfort. The statement indicated that, where alterations to railway lighting were involved, some delay might occur before the full effect of the changes became operative, but proceeded to add that those alterations not already in hand would be undertaken immediately.

This was followed by a statement on January 24 purporting to have been made on behalf of the Ministry of War Transport that the work on the main-line railways would be carried out "almost immediately." It added that the object of the improved lighting was to enable passengers in every seat to read newspapers and books in comfort and ended with the pious expectation that eventually all trains would have uniform lighting. As this ill-considered publicity is likely to react unfavourably on the railway companies, we venture to point out certain aspects of the matter which appear to have been entirely ignored.

From the outbreak of the war the railway companies have had to comply with the lighting regulations laid down by Government Departments, although they have had the most serious reactions on their operating efficiency. From time to time minor modifications have been secured in the lighting of stations, marshalling yards, and so forth, but these have all been the subject of extensive experiments and aerial survey on behalf of the departments concerned. Practically no modification has been made, however, in the lighting of passenger trains. Indeed, railway experience has shown that, even under existing conditions, many passengers will not perform the elementary duty of keeping the blinds drawn, and damage to blinds and interference with the fittings are constantly occurring. Although the railway companies, in common with the passengers, will naturally welcome as much light as can be given in their trains, consistent with maintaining national security, it should be pointed out at once that the statement that the modified lighting will enable all passengers to read in comfort in every seat is a travesty of the facts, quite apart from the variations in individual ideas of "comfort." Further, the suggestion that ultimately all trains will have uniform lighting is incapable of

achievement under war conditions due to the diversity of passenger coaches and the many different types of lighting employed. The departmental publicity also raises unwarranted expectations of an immediate and marked improvement.

Nearly 250,000 individual compartments have to be dealt with, representing about double that number of lights. These are of many different types. On one line, for instance, it will be necessary to remove and adjust 66,000 lighting cones: on another the strip lighting in 6,000 vehicles has to be enlarged by a fraction of an inch: in other cases, entirely new lighting circuits or higher wattage bulbs will have to be installed. Tens of thousands of shades will have to be painted white internally instead of black, involving the use of a considerable quantity of paint and a large number of painters, both of which are in short supply. Supplies of materials for lighting circuits and thousands of additional bulbs cannot readily be obtained and, even when they are secured, the fact that labour is short and that the coaches are in service will be severely restraining factors in carrying out the alterations. In certain classes of stock, such as the L.P.T.B. tubes, it has been possible to remove the diffusion strips quickly, but personal experience is far from confirming that one can read in comfort in any seat, while no improvement whatever has been authorised in many coaches.

The foregoing facts should have been known to the departments concerned and should have influenced them to frame their publicity accordingly, as, despite the best efforts of the railways, it may be some months at least before the alterations are completed. Our own view is that, with the war rapidly reaching its climax and the present urgent need for the conservation of manpower, the waste of labour and valuable materials involved in making these comparatively slight modifications in train lighting is entirely unjustified at the present time, particularly in view of the rapidly extending hours of daylight.

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### German Transit through Sweden

MANY rumours have been current lately about some fresh threat to the continued neutrality of Sweden. None of these has been confirmed, but it is certain that the Swedish Government has undertaken various defensive measures so as to be prepared in case the threat should materialise. For instance, several classes of conscripts are to be called up for supplementary training during the next few months, and, as the Swedish Prime Minister revealed in a speech in the Riksdag, fresh instructions have been issued to the military commanders about how to deal with any fifth column activity in the event of an attack, including one to the effect that all orders to cease resistance are to be regarded as false. It seems at least evident that the Swedes are not prepared to grant any further concessions to the Germans beyond those into which they have already been forced. In the main, the concessions are concerned with transit traffic, and it is of interest to record exactly what these are. The most important, because a permanent one, was agreed to by Sweden in the summer of 1940 after the Allied evacuation of Norway and after the Battle of France. It concerns the use of the Swedish railways for traffic between Germany and Norway.

Sweden agreed to give facilities for so-called German "leave traffic" from and to Norway, meaning that German troops stationed in Norway are allowed to travel to Germany on leave and back to Norway in special trains over the Swedish railways. The number of soldiers travelling to Norway by this route must not in any one week exceed the number leaving the country, so that reinforcement of the German troops in Norway cannot be conveyed there via Sweden. In fact, it is stated that over most of the time there has been a surplus in the direction away from Norway. The Swedish control officers are placed on board the German troop trains to check numbers, and also to see that the trains are not used by the Germans for non-military traffic. Rumours that Norwegian prisoners have been brought to Germany on board these trains are emphatically denied by the Swedish Government. Reference to this "leave traffic" is made at page 150 of our present issue.

At the same time that this agreement was made, arrangements were also concluded for the transit of German goods over the Swedish railways. The Swedish Government maintains that the goods traffic taking place is limited by the strain under which the Swedish railway system is working as a result of the difficult fuel situation, and also that, in so far as the transit of war material is allowed, this is done in accordance with the internationally accepted rules. A good deal of transit traffic of goods seems to have taken place between Germany and Finland, and a certain amount also between Norway and Finland. It will be remembered that one division of German troops was allowed to pass from Norway to Finland after the outbreak of the second Finnish-Russian war in the summer of 1941, but the Swedish Government



stressed at the time that this was isolated concession, and, in fact, it has not been repeated. There is no "leave traffic" between Finland and Germany.

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### Signalling and Operating Changes in France

THE fall of France deprived us of most sources of information about railway conditions in that country; and such news as we have received naturally has been incomplete. From statements in the press of other countries it would appear that the principal French railway journals are still being issued. It will be remembered that not long before the war a complete transformation of the signal aspects had been effected on all the principal railways, formed into the Société Nationale des Chemins de Fer, with a view to reforming the formal code of signals imposed in 1885 and to introducing a nearer approach to uniformity throughout the country. The white light gave place to the green, except on sidings, as the "clear" aspect; and the various classes of signals were given distinctive shapes, so as to be instantly recognisable even though their colour might not be seen plainly. Little attempt was made thereafter to alter the signalling practice on any of the former separate railway systems, which in some cases had been allowed in earlier years to depart from the strict terms of the Government regulations. They used varying forms of block working and even, in some cases, had a few signals peculiar to themselves. The strong appeal made by automatic track circuit controlled signalling, which, when the present war broke out, had been installed over a large mileage, has assisted in some degree in eliminating these differences, as the old types of block apparatus have been replaced largely by automatic working. Power interlocking, in the development of which the French have no cause to reproach themselves, had witnessed some notable changes just before the war, the chief of which was the introduction of a number of "semi-independent" installations in the Eastern Region, in which outlying junctions and similar installations are operated normally by remote control from some principal supervising signal box but, in case of need, can be operated locally, containing in themselves all the necessary interlocking features and affording the fullest guarantees of safe working. Some panel installations with relay interlocking certainly were in hand, and a few may have been in operation, at the outbreak of war.

With the standardisation of signal aspect and equipment went the problem of unifying the operating regulations and of framing a common rule-book for the S.N.C.F. Little had been done in connection with the latter by the time the war began, but some references to it had appeared in our columns. It must have been far from easy to reconcile some of the practices obtaining on the former separate railways, and it is likely that some time yet will elapse before the task is completed. Information reaching us, however, appears to show that appreciable progress has been achieved, and that the organisation of maintenance work has been placed on a new basis, covering both signalling and communications, apparently however, as the responsibility of the civil engineering section. Previously there had been on some lines separate mechanical and electrical signalling maintenance; the latter sometimes was associated with the ordinary electrical engineering department, and there was no correspondence between the areas into which the maintenance of the various classes of equipment was divided. In France, it may be noted, engineers are attached to the traffic department, and all developments which are suggested by operating requirements are dealt with first by the former. It is only after new equipment has been tried and sanctioned for regular use that the ordinary staff have to deal with it. It is understood that, at present, the standardisation of designs is being proceeded with cautiously; a certain number of components are dealt with before a change is made in the essential portions of the different types of apparatus with which the staff in certain fairly well-defined districts is familiar and which has given satisfactory service. An endeavour is being made, however, to lay down some uniform principles, in the light of which apparatus may be modified in the course of time and which may serve as a guide to the establishment later of standard types. Greater simplification in equipment is now being sought, especially in the matter of circuits. Uniform maintenance instructions are being drawn up, based on a comparison of the experience and practice of the several regions. The contact-ramp cab-signal apparatus, in general use, is still the subject of experiments intended to increase its reliability in winter conditions.

Telephone and telegraph apparatus is being standardised, bringing it more into line with that used by the postal depart-

ment. The number of types of cable has been substantially reduced. The traffic-control, or dispatching, system, in which telephones are used, has been extended, and, at the end of 1941, was said to be in service over some 7,000 route miles (55 per cent. of the double-track mileage); at the end of that year also nearly 250 miles more were said to be in hand. During hostilities a great deal of destruction had been wrought, but, in accordance with the stipulations of the armistice, repairs and replacements were undertaken as quickly as possible; French pioneer troops worked with German construction companies and order was practically restored by the end of last year. The unusually heavy snowfalls in the early months of 1942 are said to have brought down a considerable mileage of line wires. There is little doubt also that raids by British aircraft since the armistice must have done appreciable damage to railway plant and equipment generally.

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### The Indian Rail Transport Problem

SIR EDWARD BENTHALL, War Transport Member in the Government of India, had some interesting remarks to make upon Indian railway traffic when he opened the sixth session of the Transport Advisory Council in Delhi in September last. He emphasised that the ability of the main lines to handle so greatly enhanced a volume of traffic was due to an increase in operating efficiency amounting to about 25 per cent. The great economic and industrial activity now developing throughout the country necessitated a constant high pressure of working throughout the year, with no slack season such as formerly permitted rolling stock to be withdrawn for repairs and enabled the staff to relax its efforts during the hot weather. The present increasing military traffic had often to be arranged at very short notice and involved much light haulage of coaching and special goods stock. The recent disturbances had added considerably to the burden placed on the staff, and all the extra work now entailed had to be met with much depleted trained personnel, by reason of the large numbers of officers and men released for war and other defence services. Repairs to stock had, unfortunately, now reached a stage where some reduction in munitions output was having to be made in order to meet the demands of traffic and offset the inability of the Government to purchase new locomotives. Sir Edward pointed out, however, that the authorities of the United Nations responsible for the allocation of locomotive output were being approached to consider transport material as ranking for the very highest priority, equal to that of any other munitions, and to realise that additional locomotives must be provided if the war production potential was to be maintained.

Giving some figures, he stated that in 1941-42 the ton-mileage handled by broad-gauge lines was 28 per cent. heavier than in the last pre-war year, and the increase in passenger traffic was 3,139,000,000 passenger-miles over the figure for 1938-39. The remarkable fact was, however, that the latter increase had been achieved despite the fact that public passenger services had been reduced by 30 per cent. as compared with pre-war figures. Reverting to the subject of increased efficiency, the War Transport Member pointed out that the railways were constantly striving to improve wagon turnaround and user generally, and programmes were being worked out industry by industry to insure that raw materials and finished goods were carried only the shortest possible distances. At this point he acknowledged the assistance given and promised by many of the leading industries, and the realisation by the military authorities of the many transport difficulties and their cordial co-operation in preventing unnecessary haulage and in securing rapid turnaround of stock.

The elimination of unessential traffic was, he said, receiving close attention, but in India there were few luxury trades, and the refusal of transport to an unessential industry would create serious problems of unemployment. So that, though the movement of essential traffic was primarily insured, any wagons not covered by priority could still be fought for by the few non-essential industries. Finally, Sir Edward paid a tribute to the loyalty of railwaymen during the recent political disturbances. The wilful destruction of railway property had greatly added to the strain on the staff, and he had nothing but praise both for the patriotic conduct of the railwaymen and for the sound advice given them by their leaders. Remarkably good work had been done in restoring the damage to public property, and railwaymen had served their country well. The speaker was convinced that, with the backing of the transport authorities, the staff would be able to meet the demands of the country essential to the successful prosecution of the war, despite all and sundry difficulties which might have to be faced.

## LETTERS TO THE EDITOR

*(The Editor is not responsible for the opinions of correspondents)***"The A.B.C. of Southern Locomotives"**225-7, Laleham Road,  
Staines

Jan. 17

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Many thanks for the review of my book, "The A.B.C. of Southern Locomotives" in THE RAILWAY GAZETTE. Your criticism, however, of the A 1/X class information is not quite justified. You will see at the head of the table that "where a rebuilt class is shown the man who designed the rebuild is given as the 'designer' and the 'building date' is the date the rebuild took place." The "Terriers" are definitely rebuilt engines (except 2, still in their original condition, class A1, both service locomotives Nos. 380S and 680S—page 12). The X termination on any "Brighton" locomotive class, denotes a rebuild.

Marsh designed the rebuild but left the company before work was commenced and L. Billinton and Maunsell carried out the rebuilding to Marsh's design during the period 1911-32. This I confirmed with Lt.-Colonel Billinton and it was corroborated by Messrs. O. J. Morris, A. B. McLeod, and other Southern Railway locomotive authorities.

Yours faithfully,

I. ALLAN

[Although our correspondent has reasons for classifying the "Terrier" engines as he has done, we feel that it will occasion surprise to many because it draws a veil over important locomotive history. With one of the first of the "Terriers" Mr. William Stroudley won a gold medal at the Paris Exhibition of 1878 and credit should somewhere have been given to him for the original design, more especially as engines still exist in the original condition. The Marsh modifications were not important ones; the purpose of this designer was to prolong the life of useful engines by reconditioning them.—Ed. R.G.]

**"War Advance Claim by Senior Railway Staff"**

Jan. 22

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Many hundreds like myself will have read your article "War Advance Claim by Senior Railway Staff" with pleasure and interest, for it is the first time to my knowledge that this outstanding grievance has been made public.

The "tremendous burdens" you mention, apart from the long hours, include in my case and that of my colleagues the fact that we are always on duty, and at the country's beck and call night and day; we are called up at our homes to deal with traffic emergencies, blockages, and so on, and never feel free. Our holidays have been curtailed to two weeks and although the under £500 a year men are paid for holidays over two weeks sacrificed, those paid over £500 a year are expected to make the further sacrifice. We are expected by the Government to take our turn at firewatching "voluntary" and do so. No wonder the children ask their mothers who that man is who visits the house occasionally. If the Civil Service is the stumbling block then by all means give us Civil Service salary and conditions. If we had equal pay for equal responsibilities then many of us would be in the four figure class. We all shop in the same market today so why should the line be drawn as low as £500, and with income tax at 10s. in the £. The bonus would be halved by the tax but what was left would pay my rates and relieve the financial anxiety somewhat. The senior railway staff are contributing handsomely to the war effort, and will continue to do so, but, after over three years of such conditions one's enthusiasm is bound to weaken—the question is one of national importance and the Treasury should be made to see this.

I can assure you the question is very disturbing to all senior railway staff, and should be corrected at once. My colleagues and myself sign the salary list and find that members of the staff, what with extra for night duty, Sunday duty, bonus, etc., approach our actual amount to bank by a very narrow margin, and whereas they do their turn of duty and finish, we carry the responsibility over the twenty-four hours. Our actual earnings worked out by the hour compare with those of a Yard Inspector. If the Treasury cannot grant so small an item, then the railway companies should give their senior staff a substantial increase in salary. After all, we carry the brunt of the war, so far as the railways are concerned. Our daily rate of expenses

allowed has not even been increased and does not meet bare necessities, and we are paying out of our own pockets, from the 10s. left us by the Chancellor of the Exchequer, what is necessary above the amount allowed, usually 3s. 6d. a day. The higher paid officer is allowed actual out-of-pocket expenses, and does not feel the draught in this direction.

If you can give the question further prominence you will earn the gratitude of a large number of very loyal railwaymen who are giving their hard earned experience to further the war effort. Surely the Government realises the importance of railway transport and those who run it, or perhaps it does not, as it is composed of Civil Servants and the Civil Service was more prominent in the New Year Honours List, wasn't it?

Yours faithfully,

DISTRICT CONTROLLER, L.M.S.R.

[We have received a number of letters on the above subject.—Ed. R.G.]

**Midland Railway Service to Richmond**51, Goldsmith Avenue,  
Acton, W.3

Jan. 28

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Much interesting detail of the old Midland Railway passenger service from St. Pancras to Richmond and Earls Court via Cricklewood and Acton Wells Junction, which commenced in 1875, has been recorded in THE RAILWAY GAZETTE during the last few weeks. No mention, however, has been made of the foresight of the old Midland Company in acquiring coal yards at both High Street Kensington and West Kensington Stations, to which L.M.S.R. mineral trains still operate; no other class of traffic is carried to these depots. In 1875 both areas were undeveloped; now they are both the centres of business and factory industries. These trains run from South Acton (Bollo Lane Junction) to Acton Lane on independent lines formerly used by Earls Court passenger train services.

Yours faithfully,

J. V. A. KELLY

40, Edenfield Gardens, Worcester Park,  
Surrey

Jan. 25

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—With reference to my letter of January 11, published in your issue dated January 22, paragraph 4, line 5 should read: 6.39 and 9.30 p.m.

Yours faithfully,

V. STEWART HARAM (LT., R.E.)

**New Year Honours List**

Thaxted,

Jan. 21

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I have waited patiently, and in vain, for someone to enquire what precisely is the purpose the New Year Honours List was intended to serve. It would be interesting to know. It cannot be regarded as a recognition of individuals who have efficiently served the State, since so many who might claim to be included on that ground are not to be found there; neither can it be interpreted as recognising the work of individuals in the mass by bestowing honour upon someone who represents them, since it includes no name that can be taken to represent the work of hundreds of thousands of railwaymen.

It is true that, to the satisfaction of everyone, Mr. Stanier becomes Sir William Stanier, but only, it would seem, by virtue of work he has performed outside the railway service. That he has given this country some of the most efficient locomotives in its history is presumably accounted a minor matter. In short, what is this list supposed to mean?

The absence of any recognition of the incredible achievements of the British railways since September, 1939, is, indeed, curious in the extreme, the more so since the importance and value of that work is not in dispute. In December last, the Minister of War Transport issued a message to transport workers in the course of which he remarked: "During the last twelve months you have carried out the complex movement of men and supplies with efficiency and despatch in the face of many trials and difficulties.



The results of your labours are now apparent. Through you, Russia has been strengthened, the armies of the Middle East have been built up, and great blows for freedom have been struck in the Eastern and Western Mediterranean." It is as well that Lord Leathers tells us this, for no one could deduce it from a scrutiny of the Honours List.

It should not be supposed that astonishment at the treatment meted out to hundreds of thousands of railwaymen is confined to any section of the population. On the contrary, it is general. In his New Year message to members of the N.U.R., Mr. Burrows, the President of that great union, remarks: "I feel that during this war neither the railway managements nor the railwaymen have received the praise due to them for their efforts. The railway system of the country, in the way it has stood up to the demands made upon it, should command the admiration of all thinking people. . . . The railwaymen themselves have carried on during falling bombs, delayed action bombs, and bad weather with one idea uppermost in their minds, the trains must get through."

But, in fact, the railwaymen have done more than this, they have made good that thought and the trains have run, if not by one route then by another. Photographs which have recently appeared in *THE RAILWAY GAZETTE* show great stations, so far as a layman could tell, utterly demolished—and the trains have been running again within forty-eight hours; and tracks pitted and smashed, and, to all appearances, rendered valueless for months—and the trains have run over them again within a day or so.

When we think of the tremendous responsibility shouldered day after day by the managements of these great companies, of the miracles of engineering performed in impossible circumstances by their engineers, of hundreds of thousands of signalmen, drivers, firemen, shunters, and gangers carrying on in the pitch black with death stalking up and down the permanent way, is it any wonder if some of us feel bitter when official notice of what has been done is limited to a publication—written, apparently, for the edification of office boys and nursemaids—and an Honours List that distinguishes the railway only by ignoring their existence.

I ask once more, what is the Honours List supposed to stand for?

I am, Yours truly,

ASHLEY BROWN

### Smoking Prohibited?

Railway Clerks' Association,\*  
Midland Bank Chambers,  
Welwyn Garden City, Herts.

Feb. 1

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—When, some little time ago, the Railway Executive Committee announced that further instructions were being issued as to the prohibition of smoking in non-smoking compartments, I was hopeful that we would see a decided improvement. The recent correspondence in the *Manchester Guardian*, however, confirms my own experience that this has not taken place. The regulations continue to be broken just as I described in my letter—indeed on practically every main-line train on which I have recently travelled smoking has been taking place in "non-smokers," and it is largely left to passengers to deal with the aggressive minority of smokers who are "going to smoke where they jolly-well please."

To the instance cited by Mr. Rowland Kenney in the *Manchester Guardian* of January 26, of a porter who told him to mind his own business when he drew attention to the wrongful action of putting a woman in a "non-smoker" I add two other recent cases. (1) A woman asked a fellow-passenger (a sergeant in H.M. Forces) to refrain from smoking. He refused. At the next station the woman called the guard who said: "You had better put it out." The sergeant took no notice and the guard walked away, leaving the woman to be the subject of further rudeness. (2) A passenger took a seat in the non-smoking portion of a dining car. He asked a young man smoking a pipe to desist. The latter did so very reluctantly saying: "Other people are smoking," which was quite true. A woman seated at the next table was even more reluctant and protested that as others were smoking (under the eyes of the stewards, too) it couldn't really be a "non-smoker." Later, the guard happened to come through (the stewards being all this time at the other end of the coach) and was requested to call on the smokers to stop. He did so and passed on. One of the stewards then came through, told the smokers they could smoke if they wished (they couldn't be expected not to smoke all the way to Manchester), as the label was on the wrong side of the door!

In view of these facts which I could multiply many times over, can it be seriously maintained that all which should be done is being done, or that those to whom tobacco smoke is

objectionable or even distressing can reasonably be told that it is "up to" them to assist the railway companies to carry out the regulations?

Yours, etc.,

FRED. W. DALLEY,  
Chief Assistant Secretary

### Gradient Posts

Essex House,  
Essex Street, W.C.2

Jan. 29

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I am able to supplement the reference in Mr. G. A. Sekon's interesting letter with official data. The accident on the Cambridge line mentioned in the *Railway Chronicle* for August 16, 1845, which he quotes, occurred on a gradient of 1 in 151 falling towards Cambridge on the Eastern Counties Railway between Wendon (now Audley End) and Chesterford (now Great Chesterford) on August 4, 1845, only five days after the opening of the line from Bishops Stortford to Brandon via Cambridge and Ely.

On that occasion the engine of the 11.30 a.m. "quick train" from London to Norwich ran off the rails, dragging part of the train after it with fatal results to the fireman and injuries to four other of the company's servants.

Major-General Pasley, Inspector-General of Railways, recommended in his report on the accident (Report of the Railway Department for the years 1844-45, page 136), dated August 6, 1845: "It is desirable that they should also adopt the system of making known every change of gradient by setting up a post and a couple of arms, on which either the words 'level' to denote a horizontal plane, or the rate of inclination, such as 1 in 100, 1 in 150, etc., should be marked conspicuously, as has been done on the London & Birmingham, Midland Counties,\* and other railways; and that the length of the plane should also be marked, as on the London & Croydon Railway, where this sort of notation is the clearest of any I have seen."

The Inspector-General further expressed the opinion that gradient posts ought to be general on all railways, and his views were accepted by the Officers of the Railway Department, whose "Lordships"—we learn (page xxv)—"were pleased to suggest to the Eastern Counties and Norfolk Railway Companies, the propriety of causing every change of gradient to be marked in a conspicuous manner by a post and two arms, upon the latter of which the levels or rates of inclination should be described, and the length of each noted. This system, which had previously been adopted by the Midland and several other railway companies of their own accord, was promptly complied with by those two companies; and it appears to us desirable that the plan should be made general."

Yours faithfully,

KENNETH BROWN

### Railway Accountants

Kenya & Uganda Railways & Harbours,  
Chief Accountant's Office, Nairobi.

Dec. 4

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—With reference to your editorial comment on "Railway Accountants Professional Societies" in the issue dated September 18, 1942, I shall be grateful if you would provide me with details of the intensive scheme of training accountancy apprentices evolved by one of the British railway companies some years ago, as it will undoubtedly assist me in the solution of the relative local problem. Local junior clerks are given every encouragement and assistance in their training, and in securing professional qualifications. Training schemes have been evolved, but war conditions prevent their full operation. Nevertheless, when normal conditions return, training schemes will again operate, and I should like to bring them up to date in the meantime. Any assistance you are able to render will be much appreciated.

I would add that I am in full agreement with the views expressed in your editorial. The existing professional accountancy and transport organisations open to railway accounting staff are sufficient for them to secure professional qualifications, and I would not wish for a separate railway accounting professional body to be established. It savours too much of "segregation."

Yours faithfully,

R. P. WALKER,  
Chief Accountant

[No doubt the railway concerned will assist our correspondent by sending him the details he seeks.—Ed. R.G.]

\* In fact this had already become part of the amalgamated Midland Railway

## The Scrap Heap

Ten thousand London Transport women and their friends, using 107,400 pairs of needles, have knitted 23½ tons of wool into 200,000 pullovers, socks, and other comforts for the 20,000 members of the staff who are with the Forces or are prisoners-of-war.

The Court incline cable railway, which has carried passengers from North Broadway to the top of the hill, in Los Angeles, since 1904, ceased operations on September 30 last, by reason of shortage of operators and decreasing revenues. The line is not expected to resume operation, and will be scrapped after a period of six months.

### WINE ON WHEELS

One of the sources from which it is still possible to get a reasonably good bottle of wine at a pre-war price is the Great Western Railway. A man who travelled to North Wales the other day tells me that in the restaurant car he was able to have a half-bottle of 1929 Pommard with his luncheon. It cost 7s.; a bottle would have been 13s. Pommard of 1929 is not perhaps the best of the Burgundies; but it is not to be despised. The manager of a London firm of wine dealers tells me that his price for a similar wine would be £1 a bottle. The G.W.R. also has some champagne left. The price is 34s. a bottle for 1928 George Goulet "extra dry." The price in the West End varies from 50s. to £4 a bottle.—From "The Londoner's Diary," in "The Evening Standard."

### STARLING SABOTEURS

So popular has a section of G.W.R. telephone line in South Wales become as a nightly rendezvous of thousands of starlings that the company now has to employ a line man to act as bird-scarer. Until his appointment, telephone communication was repeatedly interrupted through the wires breaking under the weight of the birds.



"I don't like to have to say it, but it's a remarkable thing that each time one of these wretched machines goes wrong you always seem to spring up from nowhere and tell me you've put a shilling in."

[Reproduced by permission of the proprietors of "Punch"]

### "THE RAILWAY TIMES"—V.

"To diverge a moment. This was the starting point in Mr. Herbert Allen's successful City career. He circularised the shareholders of the Costa Rica Railway Company to such effect that a meeting was held and all the directors were turned out. Mr. Allen asked Mr. J. W. Philipps, now Lord St. Davids, to take the chairmanship, which he accepted, and Allen became Vice-Chairman. Soon after, he carried out the reconstruction of several of the Russian Oilfield Companies, in this being assisted by Mr., afterwards Sir, Richard Barnett, later Chairman of Committee of the House of Commons. Mr. Allen also rearranged the finances of the Anglo-Portuguese Telephone Company, and became its Chairman. The libel action was the turning-point in his business career: for the future he became, instead of a journalist, a successful City financier."

At the beginning of this century *The Railway Times* was the oldest surviving weekly paper, but *Herapath's Railway Journal* was of even greater antiquity, having been begun as a monthly octavo magazine in May, 1835, and converted to a weekly quarto journal, on August 17, 1839. In 1903 arrangements were made for the purchase of *Herapath's Railway Journal* by *The Railway Times*, and *Herapath's* ceased to exist as a separate paper with its incorporation in *The Railway Times* beginning with the issue dated December 26, 1903.

*The Railway Times* was purchased by Mr. A. M. Willcox (the present Chairman of the Tramway & Railway World Publishing Co. Ltd.) in February, 1905, and was recast in layout beginning with the issue of March 4, 1905, when the offices were transferred to 12, Norfolk Street, W.C. It continued to be published by him as a separate journal until the end of March, 1914, when it was purchased by *THE RAILWAY GAZETTE* and incorporated therein, beginning with the issue dated April 3, 1914. It had been published

regularly as a weekly journal from October 29, 1837, and is the oldest journal formed as a newspaper which is a constituent of *THE RAILWAY GAZETTE*.

The quoted extracts are from the volume "The Business and I," by the late Mr. W. J. B. Odhams.

(Concluded)

### LESS FRIVOLOUS ENGINES

It was Falstaff who remarked that it was ever the fault of the English, when they had a good thing, to make it too common, and the tendency which he detected is wonderfully illustrated in the way war phrases find themselves over-worked. Not very long ago "austerity" was the approved prefix; now "utility" has crushed it into the background. But it seems slightly belittling to that essentially-practical instrument, the locomotive, to find that some of the newspapers describe a war-model locomotive as a "utility railway engine." What were its forerunners—mere ornaments on the per-

manent way? If a locomotive is not one of the most carefully-considered examples of applied utility known to man, one would like to know where such an object-lesson is to be found. However, no doubt we shall next meet with the "utility spade" or the "utility hammer"; in these days there is no future for any tool or device which cannot be saddled with the fashionable adjective. It is the one grand example—for the moment—of a "utility" word.—From "The Manchester Guardian."

### THE JAPANESE POINT OF VIEW

The following letter was received in 1909 by the Japanese office of Alfred Herbert Limited, from one of its Japanese representatives.

Subject: Complaint about late delivery of a boring bar.

Regarding to the matter of escape the penalty for non-delivery of this bar, there is only a way to creep round same by diplomat, and we must make a statement of strike occur our factory (of course big untrue) and please address my person on enclosed form of letter and believe this will avoid the troubles of penalty of same. As Mr. Oscar Harmer is most religious and competent man also heavily upright and Godly, it fears me that useless apply his signature, please therefore, attach same by Yokohama Office making forge, but no cause for fear of prison happenings as this is often operated by other merchant of highest integrity. It is highest unfortunate Alfred Herbert so Godlike men and excessive awkward for business purpose. I think more better add little serpent like wisdom to upright manhood and thus found good business edifice.

Yours faithfully,

(Signed) .....

Copy of letter, which the firm's Japanese representative proposed should be sent in reply with forged signature of the Managing Director:—

DEAR SIR,

We regret to inform you that we had serious damages at one of our Coventry works which was caused by "Labourers Strikes" and so we was obliged to close up works about one month of repairing the Engineers, motive machinery, etc. Regarding this miserable news the "Boring Bar" was delivered from our works about one month later than the usual despatching time. Please advise your clients to postpone themselves for a month, matter relating to an "act of God" and of course, we will give precise details re strike statements in later and remains.

Yours faithfully,

OSCAR HARMER,  
Managing Director,  
Alfred Herbert Limited.—

From the "Machine Tool Review."

### TAILPIECE

It is reported that the Western Desert Railway, extended from Mersa Matruh to Tobruk since the war began, is now to extend westward to Benghazi.

So league by league the line moves on. Through desert places long unknown. To railheads ever further west, Tobruk, Benghazi, and the rest.

The sounds of war grow faint and die. Where steeped in sun the railheads lie. The sultry land is cleared and free. Between the desert and the sea.

E. C.



## OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

### UNITED STATES

#### The City of Denver on Fire

An unusual mishap befell the City of Denver, jointly-owned streamline diesel-hauled express of the Chicago & North Western Railway and the Union Pacific Railroad, near Snyder, Colorado, 110 miles east of Denver, on September 29. The Union Pacific authorities state that some object was thrown up from between the rails, puncturing a fuel tank in one of the power-unit cars, and setting it on fire. Combustion spread from this to the second power-unit car, and then on to the combination auxiliary-power unit and baggage car, the baggage-mail van, and the tap-room car, before the train was stopped. No one was injured, and no coaches left the rails. It was only recently that the competing Denver Zephyr of the Chicago, Burlington & Quincy Railroad was involved in a deliberate attempt at sabotage by the dynamiting of the track. The two trains concerned are among the fastest in America, for, notwithstanding a war deceleration of 60 min. on each run, they are required to complete their runs of 1,048 and 1,037 miles respectively in 17 hr., or at 61.6 and 61.0 m.p.h., inclusive of all intermediate stops.

#### Deceleration on the Illinois Central

One of the first general decelerations of passenger services in the U.S.A. took effect on the Illinois Central Railroad from October 18 last. Pursuing the policy of maintaining one really fast service over each route, the company has exempted the recently-accelerated Panama Limited from this ruling; also the Green Diamond, between Chicago and St. Louis, and the City of Miami, between Chicago and Miami; these three are diesel-hauled streamline trains. All the sleeping-car travel between Chicago, St. Louis, and New Orleans, now is provided for by the Panama Limited, of which the Pullman accommodation presumably has been increased to meet this additional demand; the extra service charge on this train has been discontinued. Between Chicago and New Orleans, the Creole and the Louisiane are now coach trains only, but both operate sleeping cars between other system points. In addition to the Creole and the Louisiane, trains the overall journeys of which have been increased include the Daylight and Night Diamond, between Chicago and St. Louis; the Seminole, between Chicago and Birmingham; the Hawkeye and Iowan, between Chicago and Sioux City; and many others.

#### Locomotive Modernisation

During the past two years the Missouri Pacific Railroad has carried out extensive modernisation of 25 2-8-4 freight locomotives, by which these have been converted to efficient 4-8-4 units suitable for mixed-traffic service. The original class was introduced in 1930, and the first of the reconstructed engines was in service by 1940. Chief among the alterations was the increase in driving-wheel diameter from 5 ft. 3 in. to 6 ft. 3 in. Working pressure has been raised from 230 to 250 lb. per sq. in.; and the total heating surface has been reduced from 5,325 to 4,837 sq. ft., but the steam-raising capacity of the boiler has been improved by the addition of a combustion chamber with a thermic syphon, whereby the firebox heating surface is

increased from 256 to 356 sq. ft. and the syphon heating surface from 85 to 111 sq. ft.; the superheating surface comes down from 2,330 to 1,953 sq. ft. The tractive effort remains practically unaltered at 66,640 lb. Roller bearings have been applied throughout the engine and tender, and needle-type roller bearings to the Walschaerts valve-motion. Each reconstructed engine weighs 199 tons, as compared with the original 184 tons. The 12-wheel tender accommodates 20 tons of coal, 17,250 gal. of water, and a brakeman's shelter. Before the reconstruction the 2-8-4 locomotives were making an average of 105,340 miles a month; since reconstruction as 4-8-4s they have averaged 212,740 miles a month. A cumulative mileage of 2,247,594 attained by the rebuilt engines up to the end of August last more than doubled the 1,063,729 miles made by the same locomotive in a corresponding period before rebuilding. The reconstruction work has been carried out in the company's own shops at Sedalia, Missouri.

#### Union Pacific Articulated Locomotives

In 1936 the American Locomotive Company delivered to the Union Pacific Railroad the first of a series of 4-6-6-4 locomotives designed jointly by the two companies to operate fast freight-services through mountain territory. The first order comprised 15 engines; 25 more were delivered in 1937; and a further order for 20 of an improved and enlarged type, bringing the Union Pacific fleet up to 60, has just been completed. These have four cylinders, 21 in. x 32 in.; 5 ft. 9 in. driving wheels; 4,795 sq. ft. evaporative heating surface; and 2,162 sq. ft. superheating surface; 132.2 sq. ft. firegrate area; 280 lb. pressure; and a rated tractive force of 97,350 lb. The total engine-weight is 280 tons, of which 180 tons is available for adhesion, and the 14-wheel tender, with a capacity for 28 tons of coal and 25,000 gal. of water, weighs 155 tons when two-thirds loaded, making a total of 435 tons for engine and tender in running trim. These locomotives are designed to operate over gradients as steep as 1 in 33, and round curves as sharp as 4½ ch. radius (despite their total engine wheelbase of 60 ft. 4 in.), also to work continuously at their maximum horse-power output at speeds up to 70 m.p.h. These are in addition to the larger 4-8-8-4 engines of the so-called "Big Boy" type which went into service early in 1941.

### ARGENTINA

#### New Air Freight Service

In view of the large quantities of merchandise which, due to the existing shipping shortage, are at present being carried by air between the U.S.A. and South and Central American ports, and also to the interior of the various republics, the Panagra Air Company has established the first international all-cargo air service between Balboa, Cali, Guayaquil, and Lima. By means of this service, which operates, on an average, once a week and is supplementary to the regular daily passenger and mails service, many tons of extra freight are carried monthly to Colombia, Ecuador, and Peru; and also to Argentina, Brazil, and Chile, after reshipment at Lima, on

the regular daily aeroplanes. As the war prevented the company from obtaining any new equipment for the purpose of establishing this international freight service, a reorganisation took place to permit of the utilisation of two Douglas "DC-2" aeroplanes, which were converted by removal of the seats and passenger fittings and reinforcement of the interior of the cabins to fit them for cargo traffic. Since the establishment of this service, some 3,500 metric tons of freight have been transported from Balboa, of which 14 metric tons were carried during a single week. Besides medicines and medical equipment, the cargo consists mainly of machinery, spare parts, printed matter, and manufactured goods. Although this freight service is a departure from the Panagra Air Company's regular operations, the company has already several notable achievements to its credit in the same direction. A few years ago it was responsible for the transport of an entire hydro-electric plant in Peru, comprising several hundred tons of mining equipment. A Panagra aeroplane conveyed recently a railway wagon weighing one-and-a-half tons from Cuenca to Loja, in Ecuador.

#### Transfer of Rosario Port

By a decree issued by the Argentine Government, the Director-General of Navigation & Ports was authorised to take over the port of Rosario, together with all buildings and installations, as from October 16, on which date the port company's concession was declared officially to have lapsed. The Department of Navigation & Ports will be responsible for the operation of the port until new regulations for its working have been drawn up. The ceremony of handing over the port formally was performed by the Minister of Public Works, Dr. Salvador Oria, in the presence of the President of the Republic, Dr. Ramon S. Castillo, and several cabinet ministers.

#### B.A.P.R. Diamond Jubilee

The Buenos Ayres & Pacific Railway celebrated its Diamond Jubilee in October last; the line was registered as a limited company on October 10, 1862. The company was formed with the object of acquiring from a Mr. J. E. Clark part of a concession granted by the Argentine Government for the construction of two railways—one between Buenos Aires and San Juan, passing through Rojas or Junin, Villa Mercedes, San Luis, La Paz, and Mendoza; and the other running from Mendoza or San Juan towards San Felipe de los Andes (Chile) up to the frontier. The portion acquired by the B.A.P.R. at its foundation was that between Mercedes, in the province of Buenos Aires, and Villa Mercedes, in the province of San Luis. The first section of the line—Mercedes to Chacabuco, 60½ miles long—was opened to public service on March 1, 1885; the second section—Chacabuco to Diego de Alvear, then named Orellanos, 97½ miles long—was inaugurated on February 15, 1886; and the remaining section up to Villa Mercedes, 201 miles long on October 8, 1886. A week later the first passenger train ran over the entire distance of 359 miles between Mercedes and Villa Mercedes.

On March 20, 1888, the extension from Mercedes to Palermo, in Buenos Aires, was opened to service, thus providing the railway with access to the federal capital. From Palermo the trains reached the heart of the city by running over the Central Argentine tracks. Some fourteen years later the company obtained authority from Congress to reclaim a large area of river and land on which to construct its terminus and

yard, but it was not until July, 1912, that trains ran into the present terminus at Retiro.

The railway had a chequered career during the first decade of its existence; it had to contend in 1886-87 with an almost total suspension of business in the western provinces, due to an outbreak of cholera; and, a few years later, with exceptional and disastrous floods which inundated 100 miles of line, causing a suspension of traffic for nine months.

#### Later Acquisitions

The company subsequently took over the operation of other railway undertakings, including the Argentine Great Western Railway, the Bahia Blanca & North Western Railway (now incorporated in the B.A.G.S.R.), and those sections of the Andine Railway extending from Villa Mercedes to Villa Dolores and Rio Cuarto. New branches were constructed from time to time. The company at present operates 2,807 miles of line, serving an important area, in the progress and development of which it has played a large part.

The following figures taken from the annual reports for the years 1885 and 1942 respectively, show the growth of the company during the intervening period:—

	2nd annual report (March to September, 1885)	60th annual report (12 months ended June 30, 1942)
Miles of line operated	60	2,807
Receipts (pesos) ... ..	63,000 (£3,780)	76,250,000 (£4,575,000)
Passenger traffic—		
Receipts (pesos) ... ..	21,000 (£1,260)	10,655,000 (£639,300)
Number ... ..	6,100	
Goods traffic—		
Receipts (pesos) ... ..	37,600 (£2,256)	58,200,000 (£3,492,000)
Tons ... ..	6,600	3,969,000

\* Including livestock

## MEXICO

### Railways and the Presidential Message

In his address to the House of Representatives on September 1, the President, Señor Avila Camacho, dealt at some length with the position of the National Railways of Mexico. He explained that the faults and deficiencies observed in the service had been due in a great degree to the fact that, by reason of the difficulties of navigation, an unexpected influx of traffic had been diverted to the railways, and motive power and rolling stock had been found insufficient to deal with it.

With the aid of the National Treasury, however, credits had been secured in the United States to the extent of 68,000,000 pesos, for the supply of locomotives and rolling stock, of which amount 35,000,000 pesos already had been paid and charged to the railway administration. The equipment covered by the credits included 33 locomotives, 2,000 luggage and brake vans, 270 gondola wagons, 200 tank wagons, and 20 passenger carriages. About 1,000 brake vans had been delivered already, and 22 second-hand locomotives had been secured, at a cost of 3,900,000 pesos. The railway administration had acquired, independently of the State credits, and for the narrow-gauge lines, 11 engines 49 carriages, 205 tank wagons, and 30 refrigerator vans, at a cost of 2,840,000 pesos.

The President said that the elimination of light rails in the tracks of the whole system was proceeding. New 112-lb. rails were being laid on the principal lines, and 85-lb. rails on the secondary lines. Sleeper relaying was well advanced, and other improvements had been effected in the track. Electric control of signals was being extended.

Route mileage had been increased by the incorporation in the national system of the

Uruapan-Apatzingan line, 112 km. (70 miles) in length. By agreement with the Government of Guatemala, the construction had been undertaken of the international bridge between Ayutla and Suchiate. (The opening of this bridge was referred to in our issues of November 20 and November 27 last.)

The receipts for the period ended August 31 amounted to 187,000,000 pesos, in comparison with the total of 163,000,000 pesos in the previous period, an increase of 24,000,000 pesos. Part of the increase was absorbed in a general advance of 10 per cent. in the pay of the staff, a concession which was expected to result in greater efficiency in dealing with the greatly augmented volume of traffic.

#### Mexico City New Station

Mexico City is to have a new central station. The necessity for this has been evident for some years. Originally there were three terminal stations in the Capital, namely, Colonia, Buenavista, and San Lazaro. Colonia Station was demolished and the service diverted to Buenavista, which was enlarged, but is now inadequate to deal with the greatly-increased traffic, and is antiquated in design and equipment. The proposals of the administration of the

National Railways system have been approved, and it is understood that construction of the new station, and the relocation of tracks, and so on, will also be begun shortly. A new and separate building also is proposed to provide accommodation for the administration offices.

#### Guadalajara Station

The Government has approved the plans presented by the administration of the National Railways for the construction of a new terminal station at Guadalajara. The present station was built in 1890 and is inadequate for present requirements. The new terminal will be constructed on a new site, which should provide improved access to the city.

## CEYLON

### Transport of Essential Commodities

Mr. S. W. Nelson, Director of Transport, is working out a scheme for the transport of essential commodities effecting complete co-ordination between the railway, and civil and military vehicles. The Board of Ministers considered the question of the lack of co-ordination between the transport services and requested the Director of Transport to remedy it.

The military authorities announced that to reduce empty journeys to a minimum empty service lorries and trucks would be made use of whenever possible, to carry civilian loads essential for the island's war effort, as, for example, tea, rubber, copra, and plumbago.

#### Second Reading of Ordinance

The working of the railway was criticised when Mr. J. L. Kotalawala, Minister of Communications & Works, moved in the State Council the second reading of the Ordinance to amend the Railway Ordinance.

Mr. H. F. Parfitt said that it would be better for the Government to lose on the transport of goods at present rather than increase the rates and allow dealers to increase the price of commodities. This would result in the cost of living index rising.

Mr. D. S. Senanayaka, Minister of Agriculture & Lands, said that the railway could not transport all the goods. The lorry charges for the transport of goods were at least eight times those of the railway. He emphasised that it was not the cost of railway transport that determined the price of commodities. Low rates did not help to keep down prices, because the cost of other transport was high. Even at the present time the railway was running at a loss.

Mr. H. J. Huxham, Financial Secretary, said that some members did not appreciate what was requested in the Bill. He could not agree with the suggestion that pre-war charges should be maintained. In India and other Empire countries the charges on the railway had been considerably increased. The cost of wages, sleepers, rails, and everything else had gone up, anything from 20 to 200 per cent. There must be an increase in fares and rates to cope with the extra cost of running. The estimated loss on working the railway system, before providing for interest on capital was, for the next year, 34 lakhs of rupees.

Mr. J. L. Kotalawala said that in view of the fact that the railway was now well patronised, the earnings for this year were estimated at Rs. 21 millions, the expenditure at Rs. 26 millions, and a working deficit of Rs. 5 millions.

The second reading of the Ordinance was passed by a large majority.

#### Reorganising Bus Transport

The motion in the State Council of Ceylon to reorganise the bus transport system of the island by forming bus owners into limited liability companies was passed by 25 votes to 17, after considerable opposition.

Mr. S. W. R. D. Bandaranaike, Minister of Local Administration, proposed: That the following recommendations of the Executive Committee of Local Administration for the reorganisation of bus services be approved: (a) bus services shall not be operated along any road except under exclusive licence, subject to such conditions as may be attached to the licence, including a condition that the grantee shall compensate any persons at present operating buses under licence along the route who are displaced; (b) if the persons at present operating buses under licence along a route shall form a limited liability company, that company shall be granted the exclusive licence for that route, provided that the grantee compensates any person operating a bus under licence along that route who does not expect to join the company and whose rights to participate in the company have not been acquired by any other person.

#### Mr. S. W. Nelson's View

After the State Council had sanctioned the proposal to reorganise the bus industry, Mr. S. W. Nelson, Director of Transport, stated that, in his view, this should come into operation with the least possible delay. Half a dozen companies had been formed already. The grant of exclusive bus-route licences to these amalgamations had been held up pending the decision of the State Council. Arrangements were being made to meet various groups of bus owners, to settle any difficulties or problems which they might have.



## The Western Desert Railway

*A standard-gauge line of strategic importance, built to Mersa Matrouh before the war as part of the plan for the defence of Egypt, and now extended to Tobruk in Cirenaica*

THE great British advance into Libya naturally focusses attention on the lines of communication of the British Forces, the efficiency of which must have contributed in no small measure to the success already achieved. The main line of land communication is provided by the standard-gauge Western Desert extension of the Egyptian State Railways, which, at the outbreak of the war, had its railhead at Mersa Matrouh, and has since been extended to Tobruk.

The inception of this railway was due to Khedive Abbas Hilmi, who first built a road linking his vast land holdings in the west to the town of Alexandria. He soon added the narrow-gauge railway, and subsequently replaced it by the standard-gauge line. This railway was his personal property and was built by military labour, which was sometimes paid small gratuities as its only reward, so that the total cost was small. Not only was the line intended to ensure that the Khedive's land should be worked at a profit, but it was built so as to provide a shorter and quicker route towards the western boundaries of his estates and, incidentally, to Mersa Matrouh. Supervision of the construction work was entrusted to a German (Gustav Kaiser), and, on the completion of the railway, the roadway was abandoned.

The railway originally began from Waradan, opposite the new western harbour, but the zero point was afterwards altered to Hadra, a couple of miles from the main terminus in Alexandria. The line circles the town of Alexandria and skirts the northern shore of Lake Mariut, from which it took its original name of the Mariut Railway. It then crosses on a 4 km. dam which separates the waters of the lake from the salt waters of the Mex marshes. Thereafter, the line keeps at no great distance from the coast, and actually reaches the coast at El Alamein, at km. 118. The original western terminus was at km. 170, though there is no town or village at that spot. A metre-gauge extension was built through Fuka to a lonely kilometre post 256 km. from Alexandria, where the railway met the road, and still some 40 km. from Mersa Matrouh.

The traffic offering enabled the line to pay its way, and in 1905, for instance, it carried some 500,000 tonnes of freight and about 200,000 passengers. It earned a return of some 10 to 12 per cent. on its capital. Interchange with the Egyptian State Railways was established in 1905 at the station of Monasleh. On February 17, 1914, the Egyptian Government bought the railway at a cost of £E376,000, including 7 standard-gauge locomotives, 43 carriages, and 124 wagons; also, 7 narrow-gauge locomotives, 5 carriages, and 47 wagons of 8 and 10 ton capacity.

On January 30, 1914, the

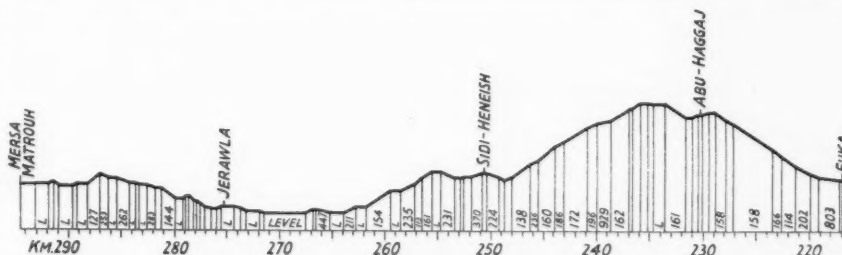
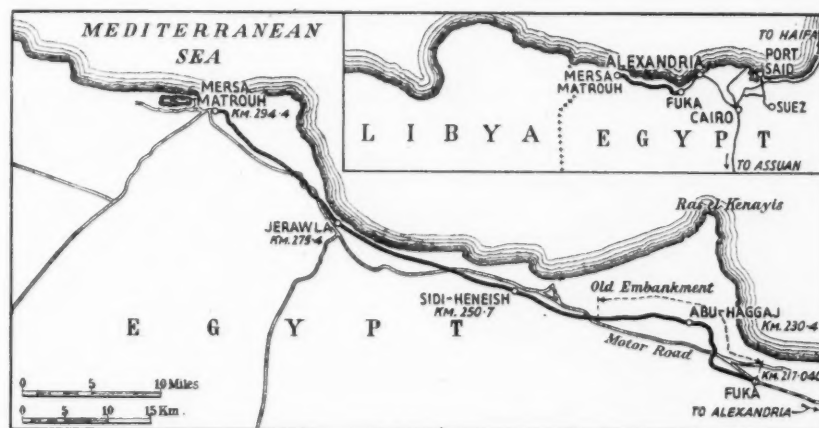
metre-gauge extension beyond the standard-gauge terminal had been closed, and the track partly dismantled, as it was then the intention of the Government to extend the standard gauge along the narrow-gauge formation. Work was actually begun, and the standard-gauge section was extended 7 km. as far as km. 177, to which point the break of gauge was transferred. Work was again stopped, although an occasional train was run over the narrow-gauge section until August 1, 1914. The Government later carried on the standard gauge to Fuka (km. 217).

In the autumn of 1935 it was decided, as a precautionary measure, to station a defensive Force at Mersa Matrouh, a coastal town some 294 km. west of Alexandria, and about 180 to 200 km. east of the Libyan frontier. Between the railhead at Fuka and Mersa Matrouh, a distance of 77½ km., there was only an indifferent motor track, quite inadequate as a line of communication for the size of the Force at Mersa Matrouh, and it was therefore decided in November, 1935, to extend the railway from Fuka to Mersa Matrouh as quickly as possible. Fortunately, this extension had already been surveyed, so that it was possible to begin construction almost at once. There were also the remains of the old narrow-gauge embankment stretching about 23 km. westwards from Fuka that could be followed.

As speed in construction was all-important, and as it was uncertain whether the extension would remain as a permanency after return to normal conditions, gradients steeper than those prevailing elsewhere in Lower Egypt were permitted. Actually, the westbound ruling gradient is 1 in 114 for a little over a mile in length, preceded by a mile of 1 in 200, and followed by 4½ miles averaging 1 in 160, in the course of a twelve-mile continuous climb out of Fuka; 1½ miles of 1 in 138 is the steepest gradient facing an eastbound train. In the first 18 km., which follow the Khedive's old narrow-gauge railway—the line rises through 260 ft., only to fall nearly as much in the succeeding 14 km.; thereafter the profile is undulating. This 260-ft. rise is necessary to surmount the ridge which, stretching athwart the course of the line, terminates in Ras el Kenayis headland, due north of Abu-Haggaj. In order to secure a reasonable gradient, the line swings northwards from its normally westerly direction, so as to make a side-long climb over the ridge. After 5 km. in a northerly direction, the westerly course is resumed, and, with a slight northerly tendency, is followed throughout the remaining 45 km. to Matrouh, roughly parallel to the coastline. Permanent stations were built as follow:—

	Distance from Fuka km.	Distance apart km.
Abu-Haggaj	13.4	13.4
Sidi-Heneish	33.7	20.3
Jerawla	58.4	24.7
Mersa Matrouh	77.4	19.0

The permanent way used was collected from various sources. Some had been intended for renewals; some was released by taking up the second track between Ismailiya and Ferdan on the Port Said main line; and some was the result of dismantling sidings in different parts of



Sketch map and gradient profile of the section of the Western Desert Railway between Fuka and Mersa Matrouh, built in 1936 to serve a defensive Force

the country. There are, consequently, no fewer than six sections of flat-bottom rail varying from 30 kg. to 47 kg. p.m., and also some 38-kg. bull-head material in this extension, a fact which did not make for speed in laying.

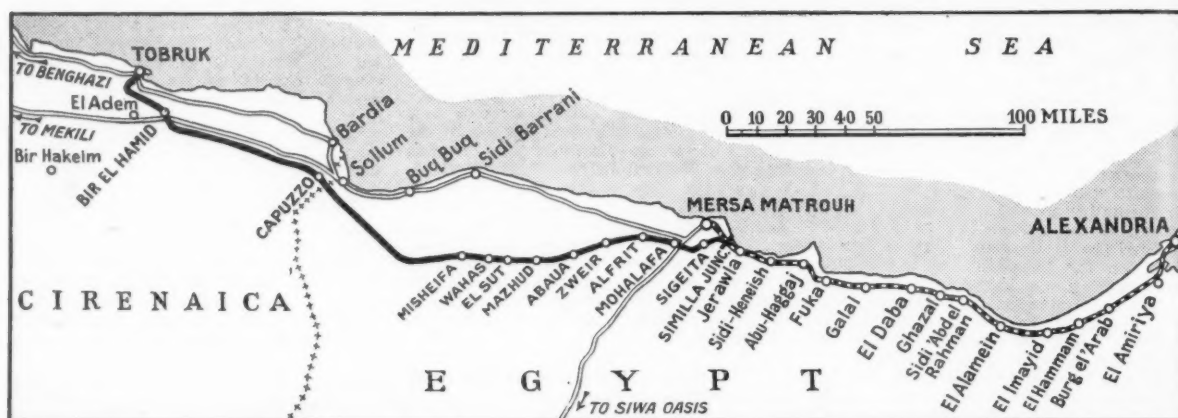
There are four bridges only: (1) 2 spans of 7 metres; (2) 1 span of 5 metres; (3) 2 spans of 7 metres; and (4) 2 spans of 7 metres. All have reinforced concrete abutments and rolled-steel-joint girder spans. Two old girder bridges on the Khedive's narrow-gauge line were reconditioned for standard gauge and loading. Concrete and Armco iron pipe culverts are used extensively.

Although construction was begun in December, 1935, it was not in full swing before January 1, 1936. By January 31 formation had been completed for 40 km. and track laid for 38 km. On the military demand at this time for an intermediate railhead station, one was laid out at Sidi Heneish, 34 km. from Fuka, complete with two loops, a triangle for turning engines, ramp sidings, etc., and

The average number of temporary labourers employed daily from the middle of December to the end of March was: in December, 800; in January, 2,900; in February, 4,700; and in March, 4,500. Supervising subordinate staff and trained platelayers and artisans numbered 150, and the whole was under the supervision of the Resident Engineer and his Assistant. In addition to the complexity of the varying types of permanent way material, there were complications connected with the remarrying of material trains to suit light engine capacity. The 3,000-4,000 men employed, and the construction engines, had to be supplied with water sent out in travelling tanks from Alexandria to railhead and distributed by motor lorry for the earthwork labour.

Finally, mention must be made of the weather, perhaps the greatest cause of trouble and delay. Intensive motor traffic had broken the crust of the desert to the degree that sandstorms were the rule rather than the exception, and there was seldom a day when visibility was

launched a counter-offensive in Libya. We evacuated Benghazi on April 3, and by April 13 the Germans had reached Bardia, near the Egyptian frontier, leaving Tobruk as a strong but isolated British garrison. During May and June there were attacks and counter-attacks in the Sollum and Fort Capuzzo area, but no large-scale German offensive against Egypt was launched. With the position more or less stabilised, the decision was taken to extend the Western Desert Railway for some 108 miles to a railhead immediately behind the British lines. In view of the topographical difficulties of the approach to Mersa Matrouh, mentioned above, it was decided to avoid the town, and to begin the new extension at a point roughly midway between Jerawla and Mersa Matrouh, which has become known as Similla Junction. The line was built by New Zealanders in about six months (certain sections at record-breaking pace), and in February, 1942, it was officially revealed that the completed railway was at work, enabling Eighth Army



Sketch map of the extension of the Western Desert Railway to Tobruk, built in 1941-42 to serve the British Eighth Army

opened for traffic on February 8, 1936. A block station was opened at Abu Hagga at the same time.

By the end of February, 66 km. of formation and 43 km. of permanent way had been completed, and another station at Jerawla also. By March 17 formation was ready as far as km. 76 and permanent way to km. 74, only 3 km. short of Mersa Matrouh. This short distance, however, contained a cutting 600 metres long and 5 metres deep; as it would obviously delay final completion, a temporary terminus was opened just short of Mersa Matrouh to relieve the strain of army transport on the road, which by then was in a very bad state. Work at Mersa Matrouh was completed on April 6, including 6 km. of sidings west of the station yard to serve various army depots, and complete permanent terminal arrangements; the train service was extended to Mersa Matrouh on April 7, 1936.

Between January 1 and April 6 (97 days), therefore, close on 100 km. of track were laid, formation completed—including this formidable cutting—bridges and culverts built, stations laid out and signalled, and three successive terminals brought into use, all with electric staff block working equipment and staff accommodation.

anything but nil. Actually the British working parties were frequently obliged to wear respirators.

This was the railway situation when the Italians entered the war on June 10, 1940, and invaded Egyptian territory, proceeding to a point east of Sidi Barrani, but west of Mersa Matrouh. The first British advance began at daybreak on Monday, December 9, 1940. No doubt the motor road, which parallels the railway throughout, was largely used by the army lorries, tanks, and other mechanical transport vehicles, but the railway made possible the transport of the great mass of heavy supplies and equipment to an advanced point whence the lead by road even into Libya was comparatively short. In fact, it would seem to have been essential to the success of so remarkably rapid advance, beginning nearly 200 miles from the main base. Imperial Forces proceeded well into Libya, occupying Cyrene on February 3, 1941, and Benghazi on February 7. In the latter district, the Imperial Forces first came into contact with a railway after leaving Mersa Matrouh. These narrow-gauge Benghazi lines were described in our issue of May 30, 1941 (page 609). The British advance reach El Agheila, and thus covered virtually the whole of Cirenaica.

At the end of March, the Germans

supplies to be railborne into areas where previously they were carried in motor lorries. Nine intermediate stations were provided, respectively at Sigeita, Mohalafa, Al-Frit, Zweis, Abaua, Mazhud, El Sut, Wahas, and Misheifa.

On November 18, 1941, our Eighth Army had taken the offensive from Sollum, and, after fierce fighting, relieved Tobruk garrison on December 10. By early January, the Germans had been pushed back once more to El Agheila. In the third week of January the Germans counter-attacked and recaptured Benghazi. For nearly four months the front was just east of Derna. The British authorities decided, as soon as the way to Tobruk was clear, that the Western Desert Railway should be further extended to that strong point—its intended objective when construction westward from Mersa Matrouh was begun, but at that time impracticable. The railway was extended to Bir El Hamid, only 15 miles from Tobruk, when the military situation again changed. On May 26 a heavy German attack was launched, and on June 13 the Eighth Army withdrew to the Egyptian frontier; Tobruk surrendered on June 21. Three days later, the Germans had reached a point beyond Sidi Barrani; on June 27, Mersa Matrouh; and on June 30, El Daba. The British



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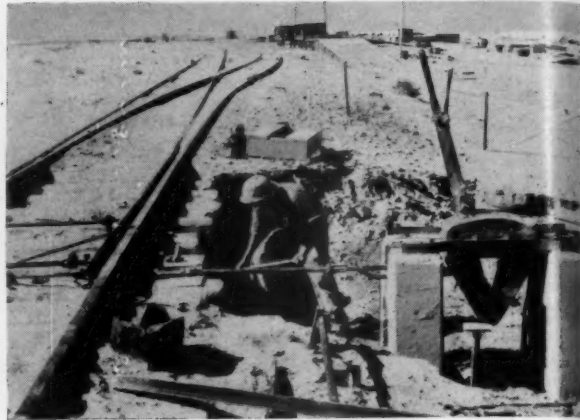
*The first train in El Alamein Station after the retreat of the German forces in November last*



*El Daba Station shortly after its re-occupation by British troops last November. El Daba was used by the Germans as the eastern railhead of the section of the line which they captured in June, 1942, and used as a supply route to their forces at El Alamein*



*Sapper locating a mine left by the retreating Germans*



*South Africans re-ballasting points at a siding damaged by shell fire*



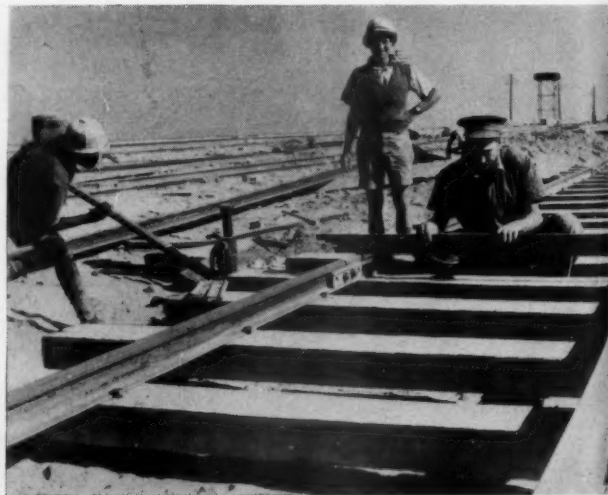
*Sidi-Heneish Station*



*A cutting near Jerawla*



*Indian troops lowering a bull-head rail into position. Most of the line is laid with flat-bottom rails*



*A South African railway engineer checking the level of the new Tobruk line at Similla Junction. Note flat-bottom rails spiked direct to sleepers*

SOME TYPICAL VIEWS ON





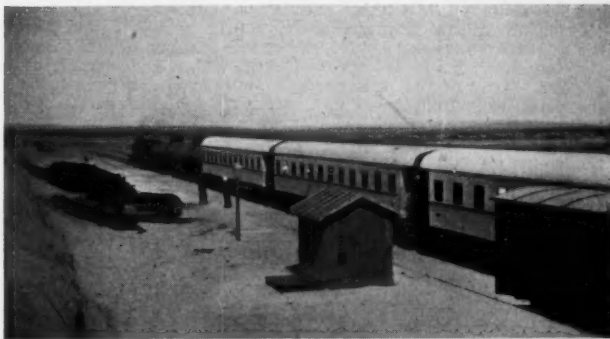
*A pair of rails complete with sleepers being carried by manual labour, on the pre-war construction to Mersa Matrouh*



*Wadi Naghamish bridge, consisting of two spans each of 7 metres, at km. 278, between Jerawla and Mersa Matrouh*



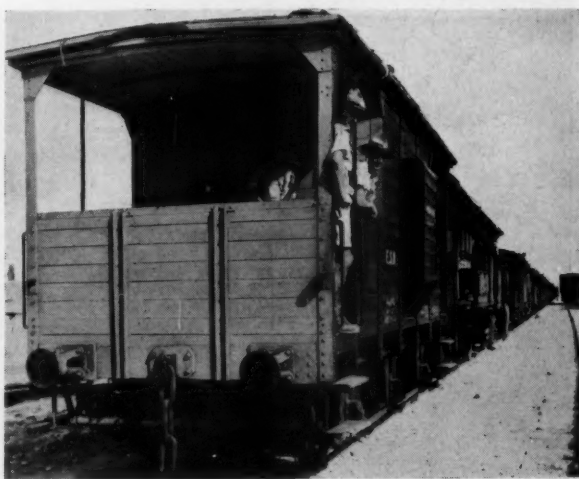
*Train from Alexandria just after arrival at Mersa Matrouh in pre-war days. Note reserve water tanks*



*Up train from Alexandria to Mersa Matrouh in peacetime, at a crossing station awaiting a down train*



*A comparatively undamaged station on the pre-war portion of the Western Desert Railway*



*New Zealanders forming the crew of a train composed of rolling stock of the Egyptian State Railways hauled by a diesel unit*

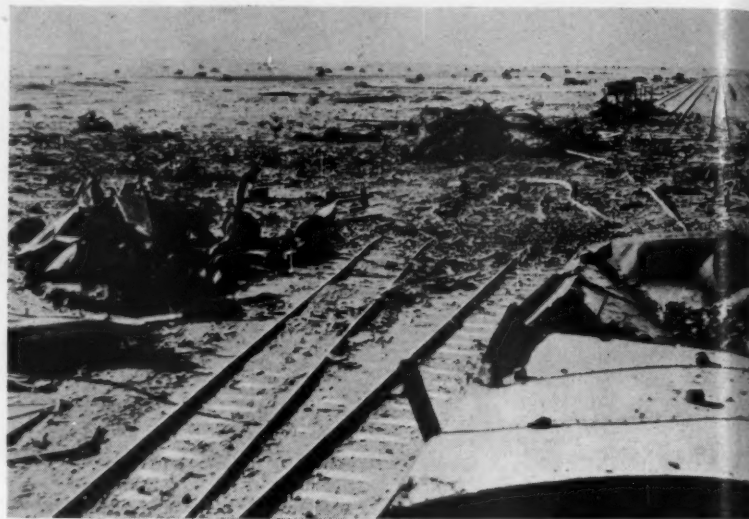
THE WESTERN DESERT RAILWAY

positions at El Alamein were then taken up.

It was not possible in the limited time available for the track to be demolished effectively throughout its length by our retiring Eighth Army, but no locomotives (excepting one, which was completely demolished) were allowed to fall into enemy hands, although some wagons could not be withdrawn by us in time. While the railway was in German occupation, the damage effected by our Forces was repaired; Italian locomotives were shipped to Africa; and in October last, the enemy was regularly working the length of some 280 miles between Bir El Hamid and El Daba, with these Italian engines and captured British wagons. In addition, the line was extended by the Germans from Bir El Hamid to Tobruk. With our present advance into Libya, the whole railway has been in Allied hands once more, since the re-occupation of Tobruk on November 13 last.

By a remarkably rapid piece of railway reconstruction work on the part of the Allied Forces—mainly South African railway construction troops—mines laid along the track by the retreating enemy were removed by sappers, and the German damage made good, within seven days. The line to Capuzzo (captured on November 12) was being used by November 19, and the remainder to Tobruk on November 20. Many of the men employed on the work were from the South African Railways & Harbours.

As may be seen from our sketch map, the course of the line west of Mersa Matrouh is well inland, to the south of the motor road, thus explaining official Cairo *communiqués* about military operations "between" the railway and the coast, which would not have been practicable if the railway had followed the coast road, as erroneously conjectured by



*Effect of a direct hit on a German ammunition train using the Western Desert Railway*

the publishers of various sketch maps. The line crosses into Libya from Egypt in the neighbourhood of Fort Capuzzo, some distance to the south of the famous Halfaya Pass.

The selection of official photographs which we reproduce gives some idea of the terrain and the form of track. Much of the line consists of flat-bottom rails spiked direct to the sleepers, but there are also sections of chaired bull-head rail, as shown being lowered into position by Indian troops.

It is reported that the Western Desert

Railway is now being extended (or will be extended) westward to the port of Benghazi. No indication of the intended alignment has been given, but the topography of the country would suggest that possibly it might take off from the existing railway at a point near El Adem (outside Tobruk) and run inland to El Abiar, a place on the existing Benghazi Railway. The existing railway, built by the Italians, was shown in detail in the map at page 609 of our issue of May 30, 1941. It was built to the Italian Colonial gauge of 0.95 metres (3 ft. 1½ in.).



#### THE CRUSADER STREAMLINE EXPRESS OF THE READING COMPANY

*This train of Budd-built stainless-steel stock, hauled by a Pacific steam locomotive, makes two double trips daily between Jersey City Terminal at New York and Philadelphia by the Reading route, with very fast point-to-point bookings, covering 360 miles each day*



## The Electrical Equipment Industry in 1942

*Although activities have been confined mainly to war work, some contracts have been executed for railways*



*Two Metrovick 12-ton locomotives handling trains in sidings*

THOUGH production has been on an intensive scale in all firms producing electrical equipment, the amount of business relating to railway electrification during 1942 was relatively small. Equipment for industry and for electricity generation and distribution was in considerable demand but much work was of a special kind. So far as is known, only one new turbo-alternator for electric railway supply was started during the year. This was a 7,500 kW set built for the Central Argentine Railway by C. A. Parsons & Co. Ltd.

Water-cooled rectifiers with pumps included another three 2,500 kW 3,000 V units by the British Thomson-Houston Co. Ltd. for the Electricity Supply Commission for service on the South African

Railways. The Metropolitan-Vickers Electrical Co. Ltd. received an order for 10 locomotives for the same system, which has a gauge of 3 ft. 6 in. These are to be identical with the 164 already supplied. They are for 3,000 V d.c. operation and develop 1,200 h.p. Their weight is 69 tons each and several can be joined together for multiple-unit working. An important feature is the provision of regenerative braking.

An interesting feature of some 1,500 kW B.T.H. rectifiers recently put into railway service is the effective smoothing of the d.c. voltage without the use of any d.c. reactor, thereby simplifying the equipment and slightly improving the efficiency and regulation. The resonant shunts have to be designed specially to

suit this arrangement, and tests have shown that the d.c. smoothing effect produced is in no way inferior to that of ordinary smoothing equipments in which both d.c. reactor and resonant shunts are employed.

Pumpless rectifiers supplied by the same company during the year included two equipments, each rated at 1,800 kW, 1,600 V for the New Zealand Government Railways. These have already been in service for some months. Each equipment has six 300 kW bulbs and the guaranteed overloads are 50 per cent. for one hour, 100 per cent. for 15 min., 160 per cent. for 5 min., and 300 per cent. momentarily.

It is reported by the Metropolitan Vickers Electrical Co. Ltd. that during the year there were several demands for shunting locomotives for industrial duties. The sixth 22-ton double-bogie shunting locomotive for the Broken Hill Proprietary Co. Ltd. of Australia was placed in service. A 13-ton battery locomotive was supplied to a steel works and a duplicate is now on order. A 17-ton trolley type shunting locomotive for handling coal trains was supplied to a power supply station for operation at 500 volts d.c. on the standard 4 ft. 8½ in. gauge. It is fitted with a structure to elevate the trolley base to suit the high overhead line.

Two other locomotives, as illustrated, were supplied to an oil refinery. In these the narrow gauge (2 ft. 6 in.) necessitated a departure from the normal arrangement with axle-mounted motors. Here the traction motor is mounted on the frame structure and transmits through double reduction gears and a jack shaft. The nominal rating is 72 h.p. on the 500 volt supply.

Equipment made for the General Railway Signal Co. Ltd., an associated firm, included track-circuiting relays and coloured-light signal equipment needed for extensions to certain lines, and to aid in speeding-up their service. In several areas the mechanical system has been replaced by electric operation. A considerable amount of signalling apparatus was made also for operation abroad.

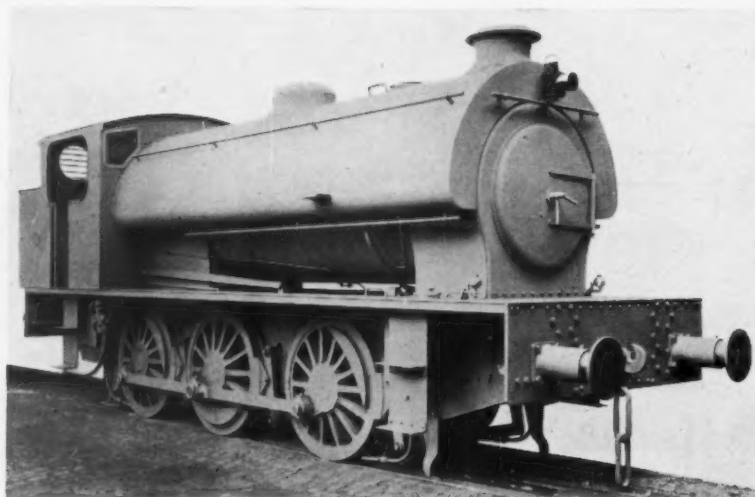
*Iron ore from the rich deposits at Kiruna, Sweden, is transported in special trucks to the ports of Luleå, Sweden, and Narvik, Norway*

*Right: An electric locomotive hauling an ore train on a section of the Kiruna-Narvik line, since 1915 the most northerly electrified line in the world*



## Saddle-Tank "Austerity" Locomotive

*A simple and robust 0-6-0 shunting locomotive has been developed from an industrial type*



THE Ministry of Supply has recently placed orders with locomotive manufacturing firms in this country for a number of 0-6-0 saddle-tank engines to a simple and robust design based by the Ministry on a standard shunter of a well-known locomotive building firm. Modifications in the original design have been made mainly to facilitate quantity production despite certain shortages in materials and manufacturing resources. Welding has been widely used throughout and among the many components fabricated by this method are the saddle tank, the cab, the coal bunker, the ash pan, and the sand boxes.

The use of steel castings has been almost completely avoided and some saving has been made in the employment of non-ferrous metals. All the wheel centres are of cast iron and cast-iron bushes are used in the coupling rods, where formerly there were adjustable split brasses.

The new engines are capable of shunting

trains of 1,000 tons; also of dealing with military trains and mixed traffic generally for short journeys. Thus, though they are similar to a much used industrial type of engine, the locomotives are of generous proportions and powerful enough to rank with most shunting engines in British railway service. The principal particulars are as follow:—

Cylinders, dia. ....	18 in.
" stroke ....	26 in.
Coupled wheels, dia. ....	4 ft. 3 in.
Evaporative heating surface, tubes ....	873 sq. ft.
" " " firebox ....	87 sq. ft.
" " " total ....	960 sq. ft.
Firegrate area ....	16.9 sq. ft.
Boiler pressure, per sq. in. ....	170 lb.
Traction effort (at 85 per cent. boiler pressure) ....	23,870 lb.
Adhesion weight ....	48½ tons
Weight of engine in working order ....	48½ tons
Water capacity of tank ....	1,200 gal.
Coal capacity of bunker ....	2½ tons

The length of the engine over buffers is 30 ft. 4 in., the height from the rail to top of chimney is 12 ft. 1½ in., and the width overall is 8 ft. 2½ in. The wheelbase is 11 ft.

The boiler barrel is parallel and constructed in two rings with inside and outside butt straps. Its length is 10 ft. 2 in., and its diameter 4 ft. 3 in. The firebox shell is round topped with a vertical backplate. It is 5 ft. 8 in. long and constructed, like the barrel, of ⅝-in. boiler-quality steel plates. The smokebox tube plate is ¾ in. thick.

The inner firebox is made of copper with walls ½ in. thick increased to ¾ in. to take the fire tubes. The inner firebox is stayed to the outer shell with copper stays riveted over at both ends, and the crown is supported by direct radial stays, the first two rows of which are of the sling type to allow for expansion. The fire tubes are of solid drawn steel and of 1½ in. outside dia. The boiler is lagged with Stillite mattresses, which are covered by steel sheets secured to crinolines.

The combination of inside cylinders and stiff cross-members with deep frames, each machined out of one solid 1½ in. thick mild-steel plate, gives an engine of great rigidity well able to withstand the strains imposed in service even allowing for derailment and minor accidents.

The drive is to the second axle, and slide valves between the cylinders are operated by Stephenson's link motion. Lubrication of the cylinders is by a Wakefield Eureka lubricator supplemented by two Furness lubricators. The piston rods and valve spindles are provided with United States Metallic Packing Co. Ltd. packings.

### Equipment

The engine is fitted with steam and hand brakes arranged to act together or independently on all wheels. The steam brake is controlled by a Vacuum Brake Company non-automatic steam brake valve, which can be operated from both sides of the cab. For feeding the boiler two No. 8 Class "R" Gresham & Craven hot-water injectors are provided under the footplate. These can work at a temperature of 125° F. and are arranged to deliver to the boiler through two Davies & Metcalfe combined steam and delivery valves on the firebox back.

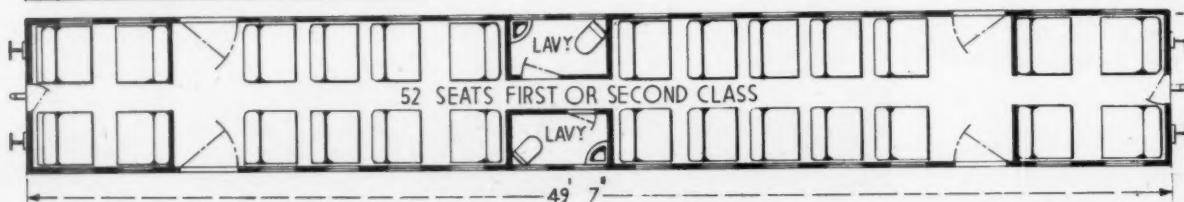
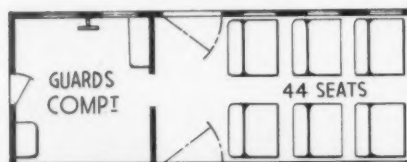
Other boiler fittings include two 2 in. dia. Ross pop safety valves and two Baines automatic shut-off water gauges with glass protectors.

## New Type Rolling Stock in Australia

ON the New South Wales Railways a close-coupled eight-coach train, differing in many respects from standard practice, has been brought into use on an outer steam suburban service in the neighbourhood of Sydney. Ordinary draw hooks and buffers are provided at the extremities of the train but the intermediate couplings are provided by links and shackles with pin and cotters. The buffers are shorter than standard.

As the accompanying diagram shows, the general layout of the coaches is an improvement on earlier arrangements and dispenses with end platforms. The train is intended to deal with peak-load suburban traffic, but the provision of lavatory accommodation makes it suitable for tourist traffic carried further afield at weekends.

Points of interest are the turnover seats and use of squared roof ends, except over the guard's compartments where the ends are rounded. The coach bodies and underframes are of timber, and reclaimed materials have been used as far as possible.





## RAILWAY NEWS SECTION

## PERSONAL

## L.N.E.R. APPOINTMENTS

The L.N.E.R. announces that Mr. G. W. Stewart, Head of the Staff Section, Divisional General Manager's Office, Edinburgh, has been appointed General Assistant to the Superintendent (Western Section), Southern Area.

Mr. Geoffrey Marshall, Goods Manager, Southern Area, L.N.E.R., as recorded in

Mr. Marshall was appointed Goods Manager, Southern Area, L.N.E.R. He has represented the L.N.E.R. on the Goods Committee of the R.E.C. since its formation before the war.

Mr. T. F. Cameron, Assistant Divisional General Manager, North-Eastern Area, L.N.E.R., who, as recorded in our January 8 issue, has been appointed Assistant to the Chief General Manager

Mr. C. K. Bird, M.M., Assistant Divisional General Manager, Southern Area, L.N.E.R., who, as recorded in our January 22 issue, has been appointed Acting Goods Manager, Southern Area, was born in 1897. He was educated at King's School, Grantham, and at St. John's College, Cambridge, where he was a mathematical scholar, and took first class honours in Part I of the Mathematical Tripos, and was placed as Wrangler in Part II. Mr. Bird served during the war of 1914-19 with the Honourable Artillery



**Mr. Geoffrey Marshall**

Appointed Chairman, Goods Committee,  
Railway Executive Committee



**Mr. C. K. Bird**

Appointed Acting Goods Manager,  
Southern Area, L.N.E.R.

our January 22 issue, has been liberated from responsibility for the goods and mineral work of that area, to take up the appointment of Chairman of the Goods Committee, constituted by the Railway Executive Committee. He will be also Liaison Officer between the L.N.E.R. and the Directorate-General of the Home Guard. Mr. Marshall was born in 1882, and was educated at Winchester and at New College, Oxford, where he obtained, in 1905, the Honours Degree (Lit. Hum.). Later in that year Mr. Marshall joined the service of the Great Northern Railway, and, after obtaining experience in various capacities, was appointed, in 1910, District Manager of the Main Line "B" District, with headquarters at Peterborough. In 1914, shortly after the outbreak of war, he joined the army and served in India for three-and-a-half years with the 9th Hampshire Regiment, eventually becoming Adjutant. In 1918 he was transferred for service under the Indian Railway Board as Personal Assistant to Major-General Freeland. He returned to England in July, 1919, and resumed his railway duties; on October 1 of that year he succeeded Mr. G. Shaw as Goods Manager, Great Northern Railway. In 1920 he went to America with Mr. H. Thornhill of the L.M.S.R. on an inquiry into certain American railway matters, on behalf of the Railway Companies' Association. In 1923,

(Works), with office at headquarters, was born in 1890 and was educated at George Watson's College and the University of Edinburgh. He joined the former North Eastern Railway as a traffic apprentice in 1912, and, after serving with the Directorate of Light Railways in France, was demobilised with the rank of Major, R.E. In 1926, he became Mineral Traffic Controller, Hull; and in 1929, he was appointed Dock Superintendent, Tyne Dock. He was made Assistant District Goods Manager, Newcastle-on-Tyne, in 1931, and two years later he became Assistant District Superintendent there. In 1934, Mr. Cameron was appointed Staff Assistant to the Superintendent, York, and in 1935 he became Assistant to the Divisional General Manager, North-Eastern Area. His appointment as Assistant Divisional General Manager, North-Eastern Area, dates from 1936.

Mr. R. G. McLeod has been appointed a Director of the Gloucester Railway Carriage & Wagon Co. Ltd.

Mr. Felix Levy, who is a Director of George Cohen, Sons & Co. Ltd., and of T. C. Jones & Co. Ltd., has been appointed a Director of Kryn & Lahy (1928) Limited.

Company and the Royal Artillery; he joined the old North Eastern Railway in 1922, gaining experience in the Commercial and Operating Departments in the head offices at York, and subsequently at outside stations. In 1926 he was appointed Chief Staff Clerk to the District Superintendent at Leeds, and in 1928 to a similar post at Middlesbrough. In July, 1928, he was transferred to the Rates Office, York, where he represented the North-Eastern Area on the Clearing House Classification and Container Committees. In 1929 Mr. Bird was appointed Head of the Rates & Statistics Section of the Chief General Manager's Office, and in 1932 also became responsible to the Chief General Manager for Parliamentary matters. In 1934 Mr. Bird was appointed Assistant Goods Manager, Southern Area, and in 1939 he became Assistant Divisional General Manager, Southern Area. Mr. Bird has been appointed to represent the L.N.E.R. on the Railway Companies' Association Commission on Post-War Planning.

Mr. F. Scopes has been appointed a Director of Stewarts and Lloyds Limited. Mr. William Stewart has resigned the Secretaryship of the company, and of subsidiary and associated companies, and has been succeeded by Mr. L. M. T. Castle, C.A. Mr. William Stewart retains his seat

on the Boards of Stewarts and Lloyds Limited and subsidiary companies.

We regret to record the death in Calcutta on January 30 of Mr. A. Duncan, C.I.E., Agent & General Manager, Bengal-Nagpur Railway.

Mr. A. E. H. Brown, District Superintendent, Newcastle, L.N.E.R., who, as recorded in our January 22 issue, has been appointed Assistant Divisional General Manager, Scottish Area, L.N.E.R., was educated at Oundle School. He entered the service of the Great Eastern Railway in the department of the Superintendent of Operation after

Much of the success of the G.W.R. Athletic Association was due to his organisation.

Mr. H. R. Webb, Principal Assistant to the Stores Superintendent, Swindon, G.W.R., has been appointed Assistant Stores Superintendent as from February 1, 1943.

Mr. J. Taylor Thompson, M.C., M.Inst.C.E., Assistant Engineer, North-Eastern Area, L.N.E.R., who, as recorded in our January 1 issue, has been appointed Engineer, York, received his early training on the former North Eastern Railway at Newcastle-on-Tyne. He was later engaged principally on new works and was intim-

Assistant to Engineer (Maintenance), London, was for a short time at the beginning of his railway career with the Lancashire & Yorkshire Railway; he subsequently joined the Great Central Railway, where he was engaged on maintenance, new works, and bridge reconstruction. Later, he entered the service of the Great Eastern Railway, and during the war of 1914-19 his services were loaned to the War Office, for railway design and construction for the Directorate of Movements & Railways. At the end of the war, after a period as Acting District Engineer at Stratford, he went to the Engineer's Office at Liverpool Street for supervision of harbour engineering. In 1924, Mr. Seaton took charge temporarily of the Cambridge District, L.N.E.R., and in the same year was appointed District



**Mr. A. E. H. Brown**

Appointed Assistant Divisional General Manager, Scottish Area, L.N.E.R.



**Mr. J. Taylor Thompson**

Appointed Engineer, York, L.N.E.R.



**Mr. T. H. Seaton**

Appointed Assistant to Engineer (Maintenance), London, L.N.E.R.

being demobilised from the Army in 1919. Two years later he was transferred to the Civil Engineer's Department, and in 1923 was detailed to the Divisional General Manager's Office to assist the late Mr. F. V. Russell in the preparation of various schemes for the electrification of suburban and main lines. Mr. Brown was appointed Assistant Yardmaster at Ferme Park in 1931, Assistant Stationmaster, Kings Cross, in 1933, and Deputy Chief Controller, Central Control (Southern Area), in 1935. In 1937 he went to Kings Cross as Assistant to the District Superintendent, and was appointed full Assistant in 1939. He became District Superintendent, Sunderland, in April, 1940, and was appointed District Superintendent, Newcastle, in 1941. He served on Mr. Frank Pick's London Evacuation Committee, and was from September, 1939, until April, 1940, District Air Raids Precautions Officer for the Kings Cross District.

We regret to record the death of Mr. Frederick A. Shepherd, General Secretary of the Great Western Railway Athletic Association for the past 25 years, which took place on January 28, on the eve of his 57th birthday. For over 40 years he had been on the staff of Paddington Goods Station, where he was Assistant Carting Agent. He served with H.M. Forces overseas in the war of 1914-19.

ately associated with the schemes for developing the coal-shipping facilities on the north-east coast, particularly the design of the new railways and facilities at West Dunston and Blyth. After the war of 1914-19, during which he was in command of a Royal Engineers' Section attached to the Artillery on the western and Italian fronts, he carried out underpinning work on the foundations of the High Level Bridge at Newcastle, and other works in the Newcastle area. He moved to York in 1925 as Personal Assistant to the Engineer, and was later Assistant to Engineer, when he was concerned with matters of organisation and with new works, including the widening of the main line between York and Northallerton and the new inward goods yard at Hull. His appointment as District Engineer, Darlington, took place in 1935, and at the end of 1936 Mr. Taylor Thompson was appointed Assistant Engineer, North-Eastern Area, from which position he is promoted to his latest post. He was awarded the Trevithick Premium of the Institution of Civil Engineers for a paper read in 1938 on "Railway Track Work for High Speeds," and was Chairman of the Yorkshire Association of the institution in 1939-40.

Mr. T. H. Seaton, M.Inst.C.E., F.S.I., Assistant to Engineer (New Works), London, L.N.E.R., who, as recorded in our January 29 issue, has been appointed

Engineer at Leeds. He was transferred to Stratford in a similar capacity in 1928. During his tenure of office there, he was associated with a number of major works, such as the Romford widening, Temple Mills' widening and hump yard, Shenfield widening, and the remodelling of Fenchurch Street Station. He has been responsible also for pioneer work in connection with the application of welding to the maintenance of railway structures and permanent way; he was, in particular, closely associated with the introduction on the L.N.E.R. of the oxy-acetylene welding of crossings; he has carried out also research work in connection with the stability of soils. In 1937 he became Assistant to Engineer (New Works), London, and in this capacity was particularly associated with the electrification schemes in the London area and subsequently with the making-good of damage by enemy action. Mr. Seaton has given papers on a variety of subjects connected with engineering to technical societies, and is a member of the Research Sub-Committee on Earth Pressures of the Institution of Civil Engineers.

We regret to record the death on January 20, at the age of 69, of Mr. A. H. Gooding, formerly Assistant to the London Divisional Superintendent, G.W.R., at Paddington, who had been retired for nearly nine years.

## TRANSPORT SERVICES AND THE WAR—176

### G.W.R. Station Names

The Great Western Railway is restoring station names in 6-in. letters on 510 stations in areas permitted by the Government. The work is already in hand.

### Lighter Southern Railway Trains

The Southern Railway announced on January 26, that, beginning on Monday, February 1, the white light in compartments of electric trains in inner and outer London suburban areas would not be switched off on the arrival of trains at stations. This is the first step to be taken in implementing the decision of the Government to permit better lighting in trains, the official statement about which we reproduced last week (page 121). The Southern Railway points out that the white light will be switched off during alerts, and also if blinds of carriages are left up by passengers.

### L.M.S.R. Anti-Gas Vehicles

The L.M.S.R. organisation for defence against air raids has been further strengthened by the introduction of special anti-gas vehicles. These units, converted from old passenger-carrying coaches, are attached to the regular riding van and form a permanent feature of selected breakdown trains. The units are divided into two sections; one contains A.R.P. clothing and all the stores and requisites necessary for dealing with gas, and the other section serves as a riding compartment and dressing room. The provision of these anti-gas units will enable L.M.S.R. breakdown gangs to deal with wreckage occurring in a gas-infected area, and with wreckage so contaminated, without seeking outside assistance.

### Air Attacks on Enemy Transport

British air attacks on Germany's railway system, both in Germany and the occupied territory of Western Europe, continue with steadily growing frequency and weight.

Since this campaign was intensified last May, scarcely a day has passed without an anti-transport attack, sometimes by fighters, sometimes by bombers, often by both. Losses of locomotives, wagons, and other rolling stock must have been felt keenly. The fact that in the past nine months one fighter group has shot up over 400 locomotives gives some indication of the scale of the attacks. In one fortnight in July at least 16 locomotives were destroyed and 11 goods trains damaged and brought to a standstill. On July 25 in one operation alone 9 stationary locomotives were put out of action by cannon fire. In one week in October, 19 engines were destroyed or damaged. In two nights a single British squadron attacked, hit, and damaged 23 goods trains on the French railway system. On the next night reconnaissance showed that in the area attacked, and in the network as a whole, all traffic had been stopped. In a period of six weeks this particular squadron destroyed or damaged at least 60 locomotives. During November, fighters alone carried out more than 80 successful attacks on trains and marshalling yards in France and the Low Countries. In that month Mustangs, Spitfires, and Whirlwinds destroyed or damaged over 60 railway engines; December witnessed the knocking out of as many more. In January, railway targets were attacked nearly every day, with good results.

This determined onslaught on the enemy's vital railway system is not confined to attacks on rolling-stock. Repair shops, locomotive works, and depots have been consistently and heavily bombed, so that the repair and production side of the rail system has been disorganised, and in several instances brought to a standstill for considerable periods. Thus, in the attack by U.S.A. bombers on the Fives-Lille works on November 8, many locomotives were destroyed or damaged, and considerable confusion to traffic was caused by a direct

hit on the turntable. The importance of this works to the Axis may be gauged from the fact that in normal conditions it is capable of producing 100 locomotives per annum. Similarly, on October 17, the heavy day raid on the Schneider works at Le Creusot, which are engaged principally in the production of guns and locomotives, was outstandingly successful. The damage sustained was so widespread that it brought the whole works to a standstill. Other targets on which Allied bombers have made heavy attacks include the Henschel works at Kassel, Krupps wagon works at Munich, and locomotive works at Munich, Düsseldorf, Nuremberg, and Karlsruhe.

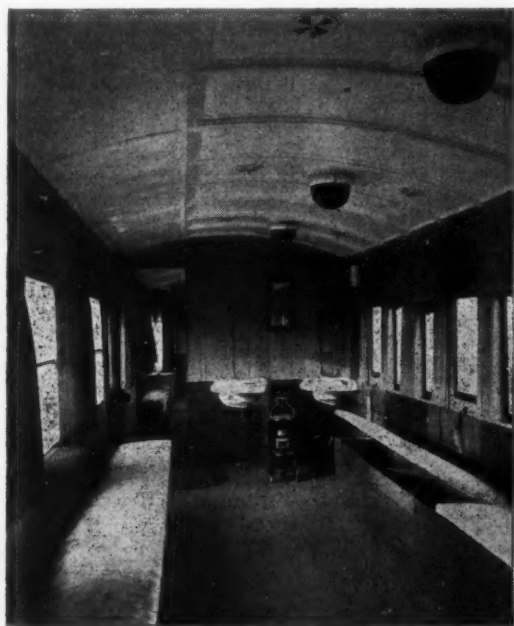
### Customs Examination in Ireland

Particulars were given in our issue of October 16 of an experimental arrangement for the examination of the luggage of passengers travelling on Great Northern Railway Company's system between Eire and Northern Ireland. The procedure adopted in conjunction with the Eire Customs officials proved eminently satisfactory, and has now been adopted as a permanent arrangement.

The accommodation on the through trains between Dublin and Belfast is segregated so that the trans-border passengers are accommodated in the front of the train, and passengers not requiring to travel beyond Drogheda or Dundalk in the rear portion. A movable barrier is provided on the platform at Amiens Street Station, Dublin, indicating this division.

The Customs officials board the train at Drogheda and are able to complete the examination by the time the train arrives at Dundalk, thus eliminating the delays which heretofore occurred by the customs examination at that station. A similar procedure is adopted in the reverse direction; Eire Customs officials board the train from Belfast at Dundalk and are able to complete the examination on the train before arrival at Drogheda.

So far, however, no arrangements have been made with the Northern Ireland



L.M.S.R. anti-gas unit, converted from old passenger carriages. Left: Riding compartment and dressing room. Right: Clothing and stores compartment



Customs officials, and their examination of the luggage at Goragwood Station takes place as heretofore.

#### Danish Train Service Reductions

All passenger services on the railways of Denmark are to be reduced by two trains a day on March 15, according to a message from Stockholm. The cut is stated to be due to fuel shortage, which has already caused a number of factories to be closed.

#### German Traffic on Swedish Railways

The question has been raised recently in the Swedish press that the extensive use of the Swedish railways for German transit traffic should be discontinued, in view of the difficulties of the Swedish railways in maintaining essential internal services for the economic needs of the country. *Aftonbladet* pointed out that German transit traffic was of no economic use to Sweden.

On January 20, the Swedish Legation in London issued a statement in the following terms:—

"A London morning paper has given an exaggerated account of the transit facilities accorded the German Military Forces on the Swedish railways. It must be stated that the passage of soldiers between Germany and Norway is permitted only on the Swedish west coast line, for troops going on leave from Norway and returning to that country. The number of soldiers passing each way is checked by Swedish control officers on board the troop trains, and in no week must the number of soldiers travelling to Norway exceed the number leaving the country. It is quite false to say that this agreement has been abused. There is no other route over which German soldiers are allowed to pass between Germany and Norway—thus there is no such traffic on the Trälleborg-Narvik route—and there is no leave or other military passenger traffic between Finland and Germany over the Swedish railways. Transport of goods is allowed in accordance with internationally accepted rules."

Subsequently, the press attaché to the Swedish Legation in London, issued a correction saying he had erroneously stated that leave traffic for German troops was confined to the west coast railway. In fact, it extended also to the railways serving northern Norway.

(See editorial article, p. 132)

#### The Queensland Railways in War

The report of the Queensland Commissioner for Railways covering the year ended June 30, 1942, records some of the drastic changes which have taken place in the economic structure of Queensland under war conditions, and the extraordinary requirements which have been made upon the railways. There has been an exceptional volume of traffic, and the requirements of the Defence Services have resulted in a number of unusual features. For example, the demands for rolling stock for essential services has necessitated the placing of restrictions on the carriage of fertiliser.

In the engineering workshops, the year was remarkable for the variety and scope of the work performed. In addition to their normal activities associated with the construction and repair of rolling-stock, the staffs were engaged in the manufacture of a miscellany of articles for defence purposes, including the production of castings, weighing 30 tons, the heaviest ever moulded at Ipswich. In the Rockhampton workshops some 1,000-ton toggle presses were partly manufactured and wholly assembled for munitions work. The machining of parts

of briquetting presses also was undertaken there. Additional trainee turners and fitters were engaged, and large numbers of trade apprentices were appointed. Dilution of labour also was necessary to provide sufficient skilled workmen to cope with the exceptional volume of work passing through the shops.

Works of considerable magnitude, including the construction of crossing loops, sidings, and loading banks, the provision of office accommodation, the insertion of new level crossings, and the widening of existing ones, were completed to provide for the needs of the Defence Services.

Various concessions were granted to defence transport, including the issue of free passes once every month to men on home leave; reduced fares for other travel; the issue of fortnightly season tickets within specified areas at a nominal charge; free transport for returned invalided soldiers to places of convalescence; and station-to-station passes for the full period of their final leave to other returned men discharged from active service.

Notwithstanding the greater burden placed upon the railways by wartime conditions, men whose services could be spared were allowed to join the various fighting forces. Since the outbreak of war 1,189 men have been released.

Precautions against air raids involved the construction of many shelters for the travelling public and employees, and also the provision of a considerable quantity of fire-fighting equipment. First aid, fire-fighting, rescue and demolition, gas decontamination, and repair squads have been formed within the railway service, and air raid wardens have been appointed. In addition, many of the staff are members of the various branches of the Civil Defence services.

The staff continued to support the war savings campaign. At the close of the year (June 30, 1942) 164 groups, with a membership of 5,953, had been formed, and war saving certificates to the value of £63,000 purchased.

#### Brazilian Railways and the War

Further details have now come to hand concerning the rehabilitation and improvement of the railway linking the Itabira iron mines (in the State of Minas Geraes) with the port of Victoria, to which we made reference last week, page 122. A report from Rio de Janeiro says that Brazil has already received from the U.S.A. 3,000 tons of steel rails and 25 goods wagons for use on this line.

The railway in question, which is owned by the Cia. Estrada de ferro Victoria a Minas, is 561 km. (348 miles) in length, and has an extension of 169 km. (105 miles) already surveyed, is of metre gauge. According to the latest reports, it has 29 locomotives, 30 carriages, and 276 wagons. The improvement of this line is being effected in accordance with an agreement between the U.S.A. and Brazil to increase the flow of iron ore from Brazil's vast iron reserves for the use of the war industries of the United Nations. The Export-Import Bank of Washington has granted credits to aid this development.

The concession to exploit the Itabira iron mines was formerly held by a British company entitled the Itabira Iron Ore Co. Ltd., but, under an agreement announced last March, the British company agreed to transfer the properties to the Brazilian Government, and the transfer was effected last May. This company, which was incorporated on March 31, 1911, also owned a direct controlling interest in the railway.

It is stated that the improvements to the

railway are designed to increase its haulage capacity from the present figure of about 250,000 tons a year to 2,500,000 tons, or a multiplication by 10. The 18,000 acres of land held by the mining company are estimated to contain hematite iron ore reserves of approximately 500,000,000 tons. How soon the railway capacity increase can be achieved is dependent in large measure upon the speed with which the equipment can be supplied by the U.S.A. At present, the absorption of materials by the U.S.A. war industry, and the shortage of shipping space, are combining to retard the assistance which the U.S.A. is able to give to the republics of Central and South America.

#### The Pan-American Highway

Another link was completed last November in the portion of the Pan-American Highway which ultimately will run from Mexico to the Panama Canal. The new 53-mile stretch of roadway connects the towns of Chorrera and Rio Hato, in Panama.

#### The Trans-Saharan Railway

Just before the Allied occupation of North Africa, a producer-gas-driven train completed a trial run on the Mediterranean-Niger (Trans-Saharan) Railway. The train is reported to have reached a point 29 miles south of Colomb Bechar, and to have returned to Oujda on the same day. Despite adverse weather conditions, with a part of the track under water, the train is stated to have maintained its schedule. It may be recalled that work on this railway is said to have been suspended on July 15, because of the intense heat, when the rail-head had reached a point 40 miles south of Colomb Bechar. Work was understood to have been resumed on September 15, but no details have come to hand since the Allied landing.

#### New Bolivia-Peru Highway

The construction of an all-weather highway from La Paz, Bolivia, to Arequipa, Peru, is reported to be under consideration by representatives of the two Governments. The proposed highway would extend from La Paz to the Desaguadero River, along the west side of Lake Titicaca, and would connect with the highway system of southern Peru at Puno. Peru would provide the equipment for constructing the road, and also technical experts to supervise the project.

#### A New U.S.A. Pullman Record

All previous records were broken by the Pullman Company in the month of September, 1942, when 835,000 members of the American Forces were moved in sleeping cars, as compared with the previous record of 750,000 in August, making a total of 5,185,000 Servicemen so handled in nine months. This development has sharply reduced the amount of sleeping accommodation available for civilian travellers, but the latter are learning by degrees that reservation as much in advance as possible, the acceptance of whatever form of sleeping accommodation is available, and travel with a minimum of luggage, make present-day journeys more tolerable than current conditions might lead them to expect.

#### War Deceleration in U.S.A.

Deceleration of passenger train services, by direction of the Office of Defense Transportation, has now spread to the Eastern States; the purpose is to enable the loads of the faster trains to be increased, and, if necessary, additional stops to be introduced, so that certain secondary trains may be

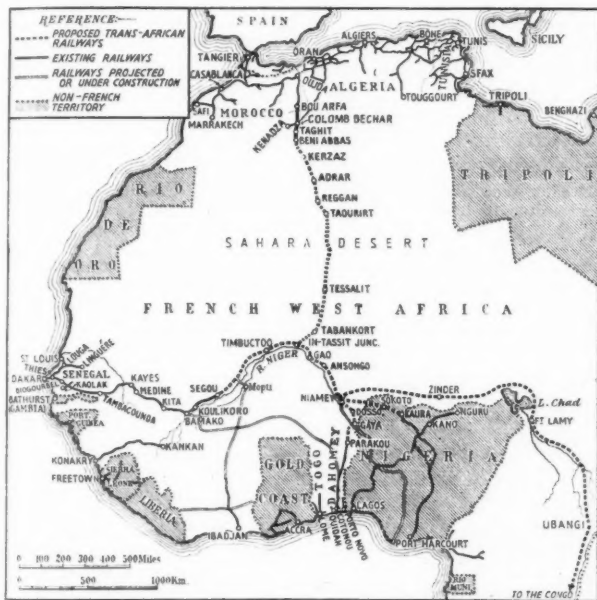
withdrawn and better use made of motive power. Included in the latest *fiat* are the famous Twentieth Century Limited and Broadway Limited of the New York Central System and Pennsylvania Railroad respectively, the schedules of which between New York and Chicago have been lengthened from 16 to 17 hr. Both remain very fast trains; indeed, the Twentieth Century still requires to maintain an overall average of 56.4 m.p.h., all intermediate stops included, over its longer route of 958 miles.

### Winter Traffic to Florida

Concern is being felt in Florida at the possible effect on winter residents of the recent order of the Office of Defense Transportation "freezing" all passenger train schedules, that is, forbidding any additions to the passenger timetables during the present emergency. Every year, as with the pre-war winter migrations in Europe to the Riviera coast, large numbers of Americans migrate in winter to the warm climate of the Florida coast resorts, and this traffic cannot be handled without the addition of a number of special trains for the winter



Algiers Station and approach roads



increase of traffic in 1943 of 15 per cent. even over the high figure of 1942; but it makes no allowance for wagons withdrawn from service during the twelve months, nor for the fact that the previous year's programme was in arrears on October 1, 1942. Furthermore, it is doubtful whether such a programme can go through in view of the serious materials situation, and also of the dispersal into other forms of war work of workers in the wagon-building industry, which is causing grave concern. Railway officers hold that the wagon-building industry should have a continuous claim

on its workers and materials, and that wagon-production schedules should be placed on a monthly basis.

### Salvage and the New York Elevated

The head of the salvage drive in New York City stated some little time ago that conversion into scrap of an estimated 7,200 tons of steel, contained in withdrawn wooden rolling stock of the New York elevated railways, and in the elevated structure on which part of it had been stored, was held up by order of the Office of Defense Transportation. The latter subsequently issued a statement to the effect that, in the case of the elevated carriages, each had a number of valuable parts, such as axles and trucks, which could not be replaced. Manufacture of new transport equipment in most categories had already been discontinued; and all would soon be stopped altogether. No useful purpose would be served by scrapping equipment today for which there might be urgent need in the near future. It was added that no instruction had been given, or request made, regarding the structure on which some of these carriages were stored. There was not the slightest objection to the removal of any of the rolling stock to other parking space.

season, particularly between New York, Philadelphia, Chicago, and other North-Eastern and Middle West cities, and Miami. A Florida deputation, headed by Governor Holland, recently waited on Director Eastman of the O.D.T., to obtain concessions in this matter, and explained that they were not asking for special trains to accommodate excursionists and holidaymakers, but facilities for the regular winter residents who have been to Florida for many years past. It is understood, however, that the Director, Mr. Eastman, gave no undertaking to the delegation as to the prospects of compliance with its wishes.

### U.S.A. Rolling Stock Programme

The United States rolling-stock programme for the year beginning October 1, 1942, contemplated the building of 900 new locomotives and 80,000 additional wagons. Of the latter, all of which, of course, were to be of the customary high-capacity bogie types standard in America, 35,000 were to be gondola wagons, 25,000 hopper wagons, 10,000 flat wagons, 4,500 ore wagons, and 2,000 covered hopper wagons; the remaining 3,500 were to be box wagons. The programme is based on an estimated



Rufisque Station, Senegal, on the extensive French Colonial metre-gauge railway system based on the strategic port of Dakar, which has been in Allied hands since November 23 last



## Wartime Services in Switzerland

In a recent issue of the *Bulletin of the Swiss Federal Railways*, Herr Müllerer of Berne gave a summary of the wartime timetable changes that have had to be made in Switzerland. References have been made to them in these columns from time to time, but some particulars from Herr Müllerer's remarks may nevertheless be of interest. As with the 1914 war, the present one found Switzerland holding a National Exhibition, with the railways running up to nearly 99,000 passenger train-kilometres (61,500 miles) daily, many of them by means of extra trains. Excellent connections with other countries had been built up over a period of 20 years. It was possible, for example, to travel comfortably in the day from Berlin or the Hook of Holland to Milan.

Between September 1 and October 7, 1939, the military timetable was in force, and civilian passenger traffic was restricted to 53,700 train-km. (33,360 miles) daily. As soon as the exhibition was able to open its doors again, this was increased by 3,200 train-km. (1,990 miles). All trans-frontier services were suspended, but before long the Swiss-Italian connections were re-established. On September 8, 1939, the Simplon-Orient express resumed service via Vallorbe and Brigue, and from October 2, 1939, services to and from Paris via Delle were resumed also, with others via Geneva. The Alsace station in Basle was closed and has remained so ever since. A certain amount of traffic, although without through coaches, was resumed with Germany. The new ordinary timetable brought into force on October 8, 1939, contained many omissions and the average daily train mileage for ordinary trains was 92,600 train km. (58,540 miles). At the end of that month an International Timetable Conference was held in Berne, and the resumption of the Vallorbe-Pontarlier services resulted on November 19, 1939. Through vehicles to and from Germany were again put on via Buchs, St. Margrethen, and Schaffhausen, in January, 1940. In the next month a further conference met at Gstaad to consider the service between the Balkans and the West, but the decisions were almost all nullified by the political circumstances which arose in the Near East.

It had been decided already to effect a division of certain trains on the Geneva-Berne and Biel and Zurich routes, to accelerate them and run fast railcars between them, with suitable connections, but the dramatic events of May, 1940, necessitated the re-introduction of the military timetable for some four weeks, and international services were again seriously disturbed. All traffic via Delle ceased, as did that through the Reichsbahn station in Basle. The boat services to Germany on the Lake of Constance, being hardly used at all, were suspended. Italy then joined in hostilities and introduced summer time on June 15, 1940, without warning, necessitating further alterations in some services, and about the same time the disastrous circumstances in France caused all traffic over the Geneva and Vallorbe routes to cease, but in August, 1940, trains again ran to Germany from the Baden station in Basle, with connections round to the Federal Railways station.

In October, 1940, the winter time-

table was put into operation with a further reduction in services, by reason of difficulties with coal supply, and in November the Timetable Conference at Vienna decided to make the agreed changes during the Sunday night of the first week-end in May. Negotiations with French officials at length resulted in the services being resumed via Geneva in December, 1940, but over no other route; in March, 1941, another interruption to the Geneva services occurred. The 1940-1941 winter services provided for 93,400 passenger train-km. (57,970 miles), with 2,300 km. (1,430 miles) more as possible extras, but the altered circumstances gave rise to much late running and the allowances for station stops, etc., proved to be too short, so that when the next modifications were made in 1941-1942, this was allowed for.

Switzerland, for the first time, introduced summer time on May 5, 1941, coinciding with the new timetable, which provided for some 96,500 passenger train-km. (59,960 miles) daily. The summer traffic proved exceptionally heavy, and there was much special traffic in connection with the 650th anniversary of the origin of the Confederation. The

opening of the new lines at Berne gave rise to some difficulties.

The Swiss Federal Council decided, in September, 1941, not to continue summer time during the winter, and alterations had to be made in the services running to Italy and Germany. A reduction of about 10 per cent. in the services in general was also made in face of the lack of fuel and materials, so that passenger train mileage came to about 84,200 train-km. (52,300 miles) daily. This has fallen again to some 81,700 km. (50,750 miles) by the abolition of certain sports trains and other services. Journey times for trains having a maximum speed of 75 km.p.h. (47 m.p.h.) have been increased, as well as station stop allowances, to enable time to be kept more easily and connections maintained, although in some cases the latter have had to be abolished. Plans have been made to cut the services still further if the difficulties increase in the present winter, but every endeavour is being made to give as good facilities as possible, and to meet reasonable public demands. The position naturally causes considerable anxiety, as the country is completely surrounded by nations at war.

## Permanent Way Institution

The fifty-ninth annual winter general meeting of the Permanent Way Institution was held at the Institution of Civil Engineers, London, S.W., on Saturday, January 30, with the President, Mr. F. E. Harrison, in the chair. A representative gathering of members was present, including three past Presidents, Messrs. R. Carpmal, S. L. Murgatroyd, and W. Wallace.

The Secretary, Mr. H. Janes, gave a report of the progress of the institution for the year 1942. There had been an improvement in the section activities, and 75 meetings had been held during the year. The Manchester & Liverpool, London, Notts & Derby, North Wales, and Hull sections had kept up to pre-war standard. The South India, and Bombay & West of India sections had continued their normal routine as far as circumstances permitted. The institution had enrolled 252 members during the year. Of home railways the figures were, L.M.S.R. 84, L.N.E.R. 25, Southern Railway 14, and G.W.R. 4.

Three *Journals* had been issued, but due to drastic paper restriction they were considerably reduced in bulk, but it had been possible to include 13 papers and contributed articles.

Mr. Harrison then moved the election as President of Mr. V. A. M. Robertson, Engineer-in-Chief, London Passenger Transport Board. Mr. Harrison said that the affairs of the institution would be in good hands, and they were fortunate in getting Mr. Robertson to accept the office of President for 1943. Mr. Wallace seconded the proposal, which was carried with acclamation. Mr. Robertson said he could assure them that in accepting the position he would endeavour to follow the example of the eminent engineers who had occupied the presidential chair, and it was his desire to do all he could to assist and further the interests of the institution.

Vice-Presidents were elected as follows: England, Mr. D. R. Bennett, Scotland, Mr. R. C. Ratray, Wales, Mr. H. N. S. Edwards, Ireland, Mr. C. U. Murphy,

Sudan, Mr. C. Mackinnon, and for India the nominee to be put forward by the Bombay & West of India Section. The Secretary, Mr. H. Janes, and Treasurer, Mr. F. Lawson, were re-elected.

Mr. Harrison, the retiring President, then gave an address on "Notes on Some Current Permanent Way Topics." This dealt with such varied items as recording of broken rails, details of a recent case of a broken rail resulting in the derailment of a passenger train, rails fifty years old, bolted and other track, track maintenance—programming the work and recording results, the construction of level crossings, spring vee crossings, stop-gaps for fencing, spot sleepers, and the felling of an arch.

Mr. Robertson, on behalf of all members, expressed thanks to Mr. Harrison for the way in which he had carried out the duties of President for the past four years. His encouragement and assistance during a difficult period were greatly appreciated, and the record of his work would remain in the files of the *Journal*. In acknowledging, Mr. Harrison said that personally he was rather disappointed that he had not been able to do more, but circumstances had prevented him. He had not been able to visit every section as he had hoped to do, and it had not been possible to pursue the question of re-organisation of procedure, and so forth; however, they now had Mr. Robertson to carry on with it. Times had been extremely difficult but when the present stress had passed he was absolutely optimistic about the future of the Permanent Way Institution, and was convinced that great strides would be made. He expressed thanks to Mr. Janes and Mr. Lawson for their help and unfailing courtesy during his years of office.

(See editorial notes, page 130)

COMPANIA DE LOS FERROCARRILES ECONÓMICOS DE ASTURIAS.—This Spanish private railway company returned a net profit for 1941 of 1,500,000 pesetas, of which 700,000 pesetas was absorbed by the payment of the dividend. The company recorded a substantial traffic increase in 1941; but it was handicapped by shortage of timber for the renewal of sleepers



## Questions in Parliament

### Non-Industrial Civil Servants

Mr. R. Assheton (Joint Parliamentary Secretary, Ministry of Supply), replying on January 26 on behalf of Captain H. F. Crookshank (Financial Secretary to the Treasury) to Mr. R. R. Stokes (Ipswich—Lab.), said that the number of whole-time non-industrial Civil Servants employed in all the Government Departments at October 1, 1942, was 664,577. The number of staff employed at that date in the Ministry of War Transport was 14,894.

### Railway Station Name Signs

Mr. R. De La Bere (Evesham—C.) on January 27 asked the Parliamentary Secretary to the Ministry of War Transport if he would now accelerate permission to the railway authorities to display on all stations the name of the station in large and more visible lettering, in view of the difficulty experienced by members of the services and the public generally in determining when they had reached their destination on sections of the line.

Mr. P. J. Noel-Baker, in a written reply, stated: As Mr. De La Bere will understand, this matter is one in which I must be guided by the views of the Defence Departments. Certain relaxations were made last autumn with their consent, and I do not think I can usefully put forward further proposals at the present time. I am informed that the railways have installed, or have under preparation, a number of new station name signs which accord with the modified regulations; other stations will be equipped as labour and signs become available.

### Petrol for Commercial Vehicles

Mr. E. Walkden (Doncaster—Lab.) on January 26 asked the Minister of Fuel & Power how many owners of commercial motor vehicles now received supplies of coupon-free petrol; to what type of firm did this privilege apply; and what were the reasons for continuing this practice.

Major G. Lloyd George (Minister of Fuel & Power) in a written answer stated: Apart from certain vehicles engaged solely in the distribution of petroleum products or benzole, which are covered by a licence under the Motor Fuel Rationing Order, no commercial motor vehicle is fuelled without the

surrender of coupons. The application of the licence to some vehicles was recently withdrawn and the question of withdrawal from others is under consideration.

### Birmingham Transport Commissioner

Major B. A. J. Peto (Birmingham, King's Norton—C.) on January 27 asked the Parliamentary Secretary to the Ministry of War Transport if he would state the qualifications and experience of the Transport Commissioner for the Birmingham area; the method of appointment, and salary.

Mr. P. J. Noel-Baker in a written answer stated: In the course of a distinguished public career, Sir Arnold Musto has had more than 27 years wide engineering and administrative experience in the Indian Service of Engineers. He was appointed by the Minister of Transport in January, 1940, on the recommendation of a Selection Committee. The Selection Committee chose Sir Arnold Musto from a number of candidates, whose names were on the Central Register, and five of whom were interviewed. His salary is £1,500 a year.

### Requisitioning of Private Motor Cars

Mr. T. M. Sexton (Barnard Castle—Lab.) on January 27 asked the Parliamentary Secretary to the Ministry of War Transport whether, in the commandeering of laid-up private motor cars, the Government would except those motor cars owned by maimed ex-service men, who, in the national interest, stopped using their cars to conserve petrol.

Mr. P. J. Noel-Baker stated, in a written answer: So far it has not been necessary compulsorily to acquire laid-up cars from private owners. Should this have to be done, I cannot give any undertaking not to acquire cars belonging to any particular class of owner, but I am glad to assure Mr. Sexton that wherever possible account would be taken of any special hardship which might be caused.

### Service Vehicles Regulations

Sir John Mellor (Tamworth—C.) on January 27 asked the Attorney-General if he would identify any regulations under statutory authority which relieved drivers of Service motor vehicles of civil obligations.

Mr. P. J. Noel-Baker, who had been asked to answer the question, wrote in reply: The following regulations relieve the drivers of service vehicles from certain

requirements relating to the driving of vehicles on the roads:—

1. Defence Regulation 72.

2. The Motor Vehicles (Variation of Speed Limit) Provisional Regulations, 1940.

There are other regulations which exempt service vehicles from certain requirements, the observance of which is to some extent a responsibility of the driver.

## Lighting in Trains

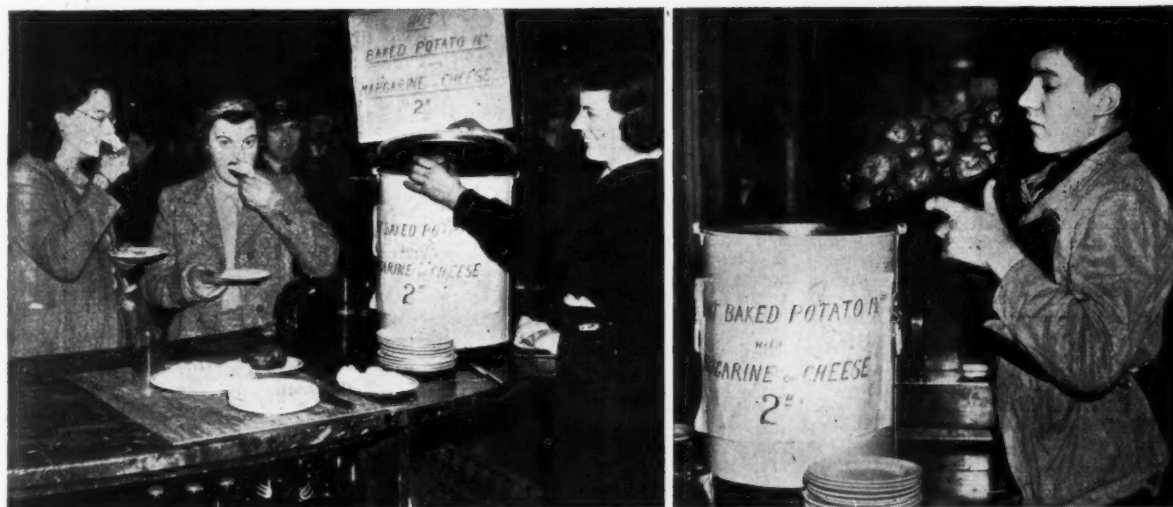
Sir Leonard Lyle has given notice of the following Question in the House of Commons: "To ask the Parliamentary Secretary to the Ministry of War Transport whether, as his Department officially informed the press on January 23 that batteries for providing improved lighting on the main railways would be available almost immediately to enable passengers to read newspapers in comfort and that all trains and public vehicles, with certain exceptions, would have uniform lighting, he will now say on what date he anticipates each of these improvements will be achieved."

## Better Food at Stations

In an interview with Alison Settle and recorded in the January 24 issue of *The Observer*, Mr. Arthur Towle, Chairman of the Railways' Catering Committee, stated that all the railway companies had asked the Government to make better provision for food at stations.

"The public," he said, "needs interesting food in handy form. Lord Woolton has been understanding. People wanted more and better cakes. Previously we had not the fat for cake-making, but now the Ministry is allowing us all that is necessary." He added that labour was a problem. This task of feeding troops and persons travelling on essential business was real war work. The Board of Trade could supply only one half the number of cups and plates needed—and cups of tea were the most frequent orders.

Mr. Towle said that catering heads of other companies agreed that the old class distinctions between buffet and tea-room and restaurant should vanish. All these should be combined in a more democratic foodbar.



Hot baked potatoes on sale at Paddington Station, G.W.R. This new food service to travellers, which is designed to assist Lord Woolton's "eat-more-potatoes" campaign, was recorded in our last week's issue. Illustration on the right shows baked potatoes being placed in a receptacle which keeps them warm.

## Notes and News

**South African Railways Earnings.**—Earnings of the South African Railways for the period December 6, 1942, to January 9, 1943, amounted to £4,018,506, compared with £3,777,167 for the corresponding period of 1941-42.

**Workmen's Carriages for G.N.R. (I).**—With reference to the illustrated article which appeared in our January 15 issue, we are informed that all the twenty vehicles referred to in the article are expected to be completed by March of this year.

**Institution of Civil Engineers.**—At an ordinary meeting of the institution at 5.30 p.m. on February 9, Mr. G. L. Groves, B.Sc. (Eng.), M.Inst.C.E., will give a paper on "Tunnel Linings, with Special Reference to a New Form of Reinforced-Concrete Lining."

**Danish State Railways.**—A message from Copenhagen to the official German news agency states that, for the month of December, 1942, the Danish State Railways realised a surplus of earnings amounting to Kr. 2,100,000, against a deficit of Kr. 200,000 for December, 1941.

**Ganz Share-Capital Increase.**—The Ganz locomotive and wagon building works, of Budapest, recently increased its share capital from Pengő 12,860,000 to Pengő 17,150,000 through the issue of new shares with a nominal value of Pengő 25 each. These were offered to the old shareholders for Pengő 44 each.

**Agreed Charges.**—Forty-eight more applications for the approval of agreed charges under the provisions of Section 37 of the Road & Rail Traffic Act, 1933, have been lodged with the Railway Rates Tribunal. Notices of objection must be filed with the Registrar, at Wellington House, 125-130, Strand, London, on or before February 9.

**Level Crossings in Denmark.**—According to a message from Copenhagen, to the official German news agency, the Danish Minister of Public Works is planning the construction of more bridges over railways, to do away with level crossings, at a cost of Kr. 16 million. To provide more employment, it is stated, the financial committee of the Folketing already has granted Kr. 500,000 for the preliminary work.

**Escalators at Marylebone.**—On Monday last, February 1, two new escalators began work at Marylebone Station, Bakerloo Line. Simultaneously, the three lifts, which have seen 36 years of service, ceased to run. The escalators take passengers direct from the tube station to the circulating area of the L.N.E.R. main-line station. Passengers thus avoid the necessity of having to cross the road from one station to the other. This proves a great advantage to passengers, and not least to soldiers with heavy equipment to carry.

**South African Railways & Harbours Increased Traffic.**—In a report issued on January 12 by Brigadier C. M. Hoffe, General Manager, South African Railways & Harbours, it is stated that, for the year ended March 31, 1942, accumulated surplus totalled £6,872,926, compared with £3,231,419 for the previous year. Passenger revenue amounted to £8,499,227, a record figure, and an increase of £1,500,000 over the preceding similar period. The tonnage of goods conveyed was 34,058,515, an

increase of nearly 1,000,000 tons over the previous record set up in 1940-41.

**Belfast & County Down Railway Company.**—The directors recommend the payment on March 1 of the arrears of dividends on the 5 per cent. preference stock for 1929 and 1930, less tax. A further half-year's interest, less tax, will be paid on the 4½ per cent. "A" preference stock for the half-year ended December 31, 1942. The carry forward is £2,227, against £2,521 brought in.

**Road Accidents in December 1942.**—The return issued by the Minister of War Transport of the number of persons reported to have died, or to have been injured, as a result of road accidents in Great Britain during the month of December last shows 780 deaths (compared with 1,024 in December, 1941), 3,461 seriously injured (compared with 4,699 in December, 1941), and 9,381 slightly injured (compared with 13,601 in December, 1941).

**Grand Union Canal Company.**—Shareholders of the Grand Union Canal Company, at a meeting on January 27, presided over by Mr. John Miller, unanimously approved the introduction into Parliament of the Bill intitled "An Act to make better provision for regulating the capital of the Grand Union Canal Company and the administration of their affairs; to confer further powers on the company; and for other purposes."

**Permanent Way Institution.**—A meeting of the Manchester & Liverpool Section will be held in the City Technical College, Byrom Street, Liverpool, on February 13, at 3 p.m., when, at the conclusion of other business, a lecture on "Permanent Way Drainage" will be given by Mr. A. E. Briggs, of Liverpool. He will describe from personal experience the work carried out on various jobs, which included a broken culvert under the line, tunnel drainage, and main-line work.

**British Railways Pictorial Exhibition.**—An exhibition is being held at the offices of Dean & Dawson Limited, 81, Piccadilly, W.1, depicting historic and dramatic incidents associated with the British railways under war conditions. The exhibition, which has been organised by the four main-line companies and the L.P.T.B., includes three paintings by Mr. Norman Wilkinson ("An L.M.S.R. Express Bombed and Machine-Gunned"; "The L.M.S.R. Cross-Channel Steamer *Scotia*—Sunk off Dunkirk"; and "Blitz on an L.M.S.R. Marshalling Yard"); the originals of some well-known posters by Messrs. Frank Mason and Leslie Carr; and a series of water-colours of Waterloo Station in wartime by Miss Helen McKie.

**German Absorption of Polish Wagon-Building Works.**—The Polish engineering and wagon-building works of Zieloniewski & Fitzner-Camper, of Krakow, recently was taken over by Oberschlesische Hüttenwerke A.G., of Gleiwitz, in accordance with a lease agreement concluded with the German trustee-administrator of the former. The length of the lease has not been disclosed. The new company is named Zieloniewski Maschinen-und Waggonbau Gesellschaft m.b.H. Of the share capital, the majority participation of 2,000,000 Zloty is shared between Oberschlesische Hüttenwerke and Ferrum Aktiengesellschaft, of Katowice, which also belongs to the Ballestrem concern.

**Future of Transport Industry.**—Mr. A. E. Sewell, Chairman of the railway panel of the Road & Rail Central Conference, at

a meeting of the North-Western Regional Committee in Manchester on January 27, said that the new relationship between road hauliers and the railways, which had stood the test of more than three difficult years, presaged a happier future within the transport industry. Referring to the future of the latter, Mr. Sewell said: "Sectional interest will have to be subordinated to general interest, and we must take our share in ensuring that transport is efficient, as judged by the needs of agriculture and industry, and in ensuring that our charges, while enabling us, with efficient management to maintain our services, are fair and

## British and Irish Railway Stocks and Shares

Stocks	Highest 1942	Lowest 1942	Prices	
			Jan. 29, 1943	Rise/Fall
<b>G.W.R.</b>				
Cons. Ord. ...	58	39	61	+
5% Con. Pref. ...	115½	105½	118	+
5% Red. Pref. (1950) ...	109½	103½	109	—
5% Rt. Charge ...	133½	123½	134½	—
5% Cons. Guar. ...	130½	121½	134	—
4% Deb. ...	117	105	116½	—
4½% Deb. ...	118	108	116½	—
4½% Deb. ...	125	113	121½	—
5% Deb. ...	137	126	135	—
2½ Deb. ...	77	70	75	—
<b>L.M.S.R.</b>				
Ord. ...	28½	16½	29	+
4% Pref. (1923) ...	63½	50½	63½	—
4% Pref. ...	76½	67½	78	—
5% Red. Pref. (1955) ...	103½	94½	103½	—
4% Guar. ...	104½	97½	105½	—
4% Deb. ...	108½	101½	109	+
5% Red. Deb. (1952) ...	111	107½	109½	—
<b>L.N.E.R.</b>				
5% Pref. Ord. ...	9½	2½	10½	+
Def. Ord. ...	5	1½	5	+
4% First Pref. ...	62	49½	63	+
4% Second Pref. ...	32½	18½	32½	—
5% Red. Pref. (1955) ...	95½	79	96½	—
4% First Guar. ...	98	88	99½	—
4% Second Guar. ...	90	78	90½	—
3% Deb. ...	85	76	85½	—
4% Deb. ...	106½	100½	108½	—
5% Red. Deb. (1947) ...	106	103	104½	—
4½% Sinking Fund Red. Deb. ...	106	102½	105½	—
<b>SOUTHERN</b>				
Pref. Ord. ...	77	61½	78	+
Def. Ord. ...	23½	14½	24½	+
5% Pref. ...	112½	104	117½	—
5% Red. Pref. (1964) ...	110½	105½	109½	—
5% Guar. Pref. ...	131	121½	134	—
5% Red. Guar. Pref. ...	115½	109½	114½	—
4% Deb. ...	116	104½	116	—
5% Deb. ...	134	125½	134	—
4% Red. Deb. (1962-67) ...	110½	106	110½	+
4% Red. Deb. (1970-80) ...	111	106½	109½	—
<b>FORTH BRIDGE</b>				
4% Deb. ...	109½	108	108	—
4% Guar. ...	105½	100	103½	—
<b>L.P.T.B.</b>				
4½% "A" ...	122½	111	124½	—
5% "A" ...	131½	122	132½	—
3% Guar. (1967-72) ...	95½	97½	100	—
5% "B" ...	121	111½	122½	—
"C" ...	56½	38	60	—
<b>MERSEY</b>				
Ord. ...	27½	20½	28	—
3% Perp. Pref. ...	61½	56½	59	—
4% Perp. Deb. ...	102½	99½	104	—
3% Perp. Deb. ...	80½	76	79	—
<b>IRELAND</b>				
<b>BELFAST &amp; C.D.</b>				
Ord. ...	9	4	9	—
<b>G. NORTHERN</b>				
Ord. ...	29½	12½	25½	—
<b>G. SOUTHERN</b>				
Ord. ...	25	10	22	—
Pref. ...	29	12½	22½	—
Guar. ...	53	35½	50½	—
Deb. ...	71½	55½	66½	—

§ ex-dividend

reasonable, and are so levelled-out as not to discriminate either for or against individual firms or localities."

**"Paper Goes to War."**—An exhibition entitled "Paper Goes to War" was opened at the Royal Exchange, on January 28, by the Lord Mayor of London, Sir Samuel Joseph, who was introduced by Mr. Stanley Bell, Chairman of the Waste Paper Recovery Association Limited. Mr. J. R. Sutton, President, Waste Paper Merchants' Association, also spoke. The exhibition, which will be open daily (Saturdays and Sundays

excepted) until February 12, from 10 a.m. to 4 p.m., shows many aspects of the way in which paper plays an essential part in the war effort. There are examples of printed forms which have been reduced considerably in size, yet remain adequate; these exhibits include various forms in use on British railways; the thinner tickets now being issued by the L.P.T.B. are shown also. Other exhibits include a bomber gun-turret, which can be worked by visitors, and to cover the Perspex of which, when it leaves the factory, special paper is needed; a Rolls-Royce "Merlin" aircraft engine,

together with the blueprints used for its construction; cordite carriers made from paper, for use in Royal Ordnance factories, where metal must be avoided for fear of explosion; and shell containers, made from paper. Red Cross personnel show visitors how parcels for prisoners-of-war are packed, and the various types of paper required for this; and girls also may be seen making cardboard mortar-bomb carriers, and other articles in the manufacture of which paper plays a large part. Another feature is a power-driven machine in which confidential papers are shredded beyond recognition.

## Railways Pool Locomotives

### Government thanks railway workers

On January 29, Mr. P. J. Noel-Baker, M.P., Parliamentary Secretary to Lord Leathers, Minister of War Transport, visited one of the works of the Southern Railway Company, to inspect two new War Department locomotives which have been built in the short time of two months. Mr. Noel-Baker met the workers and saw a number of other similar engines under construction. When thanking the men he stressed the importance of locomotive construction as a priority war-need.

The two completed locomotives built by the Southern Railway, bear the letters "L.M.S.," a fact indicative of the pooling of railway resources in times of war.

Those present in addition to Mr. Noel-Baker included:—

Sir Alan Anderson, Controller of Railways, and Chairman, Railway Executive Committee; Sir Alan Mount, Chief Inspector of Railways, Ministry of War Transport; Mr. Fleetwood Pritchard, Public Relations Officer, Ministry of War Transport; Sir Thomas Royden, Chairman, London Midland & Scottish Railway Company; Sir William Wood, President, L.M.S.R.; Sir William Stanier, Chief Mechanical Engineer, L.M.S.R. (who designed the locomotives); Mr. R. Holland-Martin, Chairman, Southern Railway Company; Mr. E. J. Missenden, General Manager, S.R.; Mr. J. Elliot, Deputy General Manager, S.R., and Mr. O. V. Bulleid, Chief Mechanical Engineer, S.R. (who is responsible for the construction of the locomotives).

## Contracts and Tenders

The Egyptian State Railways have recently placed the following orders:—

The General Electric Co. Ltd.: Valves and clips.

Caprotti Valve Gears Ltd: Caprotti valve gear spares.

Wilham Jacks & Co. Ltd.: Zinc ingots.

Hoffmann Manufacturing Co. Ltd.: Ball bearings.

British Drug Houses Limited: Laboratory chemicals.

Steel Peech & Tozer: Forgings.

P. & W. MacLellan Limited: Round steel bars.

British Iron & Steel Corporation: Alloy bright bars.

Callender's Cable & Construction Co. Ltd.: Terminal blocks.

Standard Telephones & Cables Limited: Valves.

Chas. Pearson & Sons Ltd.: Paper sleeves.

Elliott Bros. (London) Ltd.: Paper slips.

Dubilier Condenser Co. (1925) Ltd.: Mica transmitting condensers.

British Insulated Cables Limited: Condensers.



A group of railway directors and officers, members of the Ministry of War Transport, and representatives of the workers who erected the locomotives



Mr. P. J. Noel-Baker meeting some of the men from the works



Mr. P. J. Noel-Baker in the driver's cab



## Railway Stock Market

Although Stock Exchange markets maintained a very firm undertone in most sections, the volume of business has been moderate; sentiment has reflected a disposition to await new war developments. The rise in values last month has had the effect of scaling down the yields obtainable on many classes of securities. Nevertheless, those ruling on home railway stocks still have an attractive appearance, and there seems little doubt that there is reasonable scope for further improvement in prices when markets resume a buoyant trend. The tendency for the time being is to await the coming dividend announcements; it can be assumed that, if expectations of moderately better payments are realised, there will be a satisfactory upward adjustment in prices of junior stocks because of the increased attraction of the yields offered. Indications that the pace of the war has been considerably accelerated by recent developments have led markets to give even more attention to discussions as to post-war prospects. Nevertheless, it is realised that it is very difficult to estimate the factors likely to rule in the post-war period, particularly as much may depend on Government policy. Apart from the merits of home railway stocks on yield considerations, it should not be

overlooked that it would appear that there is no other industry whose prospects in the early post-war period are so clearly defined. The existing rental agreement with the Government is to run until at least one year after the cessation of hostilities; and while the agreement is in force, dividends on junior stocks at around current levels are considered to be assured. Moreover, it seems not unlikely that the rental agreement will continue until such time as a decision is reached on the important question of the after-war reorganisation of transport. Furthermore, there is every reason to assume that the railways and their stockholders will receive fair and equitable treatment in any such reorganisation, bearing in mind their vital contribution to the war effort and also the claim to standard revenues under the Act of 1921.

Southern deferred continued to attract rather more attention and further improved to 24½ at the time of writing, compared with 24½ a week ago. Moreover, Southern preferred at 78½ gained half-a-point on balance; the 5 per cent. preference remained at 117. Elsewhere, Great Western ordinary was 61½, compared with 60 a week ago; the 4 per cent. debentures continued at 116, the guaranteed stock at 134, and the 5 per cent. preference at 118. L.M.S.R. ordinary at 29 was unchanged on balance; the senior

preference gained half-a-point to 78½, but the 1923 preference lost a similar amount to 63½. L.M.S.R. 4 per cent. debentures remained at 109; the guaranteed stock was slightly higher at 106. Among L.N.E.R. issues the preferred and deferred continued to show rather more speculative activity, but earlier gains were not fully held. L.N.E.R. first and second preference at 63 and 33 respectively were unchanged on balance, as was the first guaranteed at 99½; the second guaranteed showed a moderate gain to 91. This railway's debenture stocks were well maintained. In other directions, London Transport "C" at 60 was slightly above the level ruling a week ago.

Argentine railway securities showed no very definite trend, awaiting news as to the outcome of the application of the companies to raise rates by 20 per cent. The difficulties of the Argentine railways under existing conditions are generally realised. The firmness with which the stocks are held is based largely on hopeful views of long-term considerations, as there will be widespread demand for Argentine products during the rebuilding of Europe after the war. Central Uruguay stocks have been in request, and elsewhere, San Paulo ordinary was 58½. French railway bonds were again higher on balance. Small fluctuations continued in Canadian Pacifics.

### Traffic Table and Stock Prices of Overseas and Foreign Railways

Railways	Miles open	Week Ending	Traffic for Week		No. of Weeks	Aggregate Traffic to date			Shares or Stock	Prices						
			Total this year	Inc. or Dec. compared with 1941/2		Totals		Increase or Decrease		Highest 1942	Lowest 1942	Jan. 29, 1943	Yield % (See Note)			
						1942/3	1941/2									
South & Central America	Antofagasta (Chili) & Bolivia	834	24.1.43	£ 30,410	+ £ 9,620	4	106,600	£ 61,640	+	24,960	Ord. Stk.	14	7½	12½	Nil	
	Argentine North Eastern ...	753	23.1.43	10,308	+ 1,308	30	382,380	329,388	+	52,992	6 p.c. Deb.	19½	10	18½	Nil	
	Bolivar ...	174	Dec., 1942	6,234	+ 1,743	52	59,762	47,694	+	12,068	Bonds	20½	9	21½	Nil	
	Brazil ...	2,807	23.1.43	112,200	+ 12,300	30	2,785,620	2,410,080	+	375,540	Ord. Stk.	7½	4	6	Nil	
	Buenos Ayres & Pacific	5,080	23.1.43	198,540	+ 30,960	30	4,476,780	4,128,720	+	348,060	Ord. Stk.	12½	7½	11½	Nil	
	Buenos Ayres Great Southern	1,930	23.1.43	54,960	+ 3,180	30	1,560,420	1,493,760	+	66,660	"	12½	6	12½	Nil	
	Buenos Ayres Western	3,700	23.1.43	145,644	+ 35,724	30	3,850,635	3,163,635	+	687,000	"	9½	4½	7½	Nil	
	Central Argentine ...	972	24.1.43	35,150	+ 11,348	30	718,397	689,612	+	28,785	Ord. Stk.	8	4	5½	Nil	
	Do.	262	Dec., 1942	14,959	+ 6,794	27	79,919	135,989	+	56,070	Stk.	16½	11	13½	Nil	
	Costa Rica ...	70	Dec., 1942	21,000	+ 8,160	52	194,705	148,870	+	45,835	1 Mt. Db.	90½	89	89½	6½	
	Dorada ...	808	23.1.43	16,080	+ 3,162	—	543,888	475,428	+	68,460	Ord. Stk.	9½	4½	8	Nil	
	Entre Rios	1,030	23.1.43	17,700	+ 4,000	3	56,000	44,500	+	11,500	Ord. Sh.	33½	9½	39½	6½	
	Great Western of Brazil	794	Nov., 1942	\$481,524	+ \$50,446	52	\$5,554,318	\$5,097,659	+	\$456,659	"	—	—	—	—	
	International of C. Amer.	22½	Dec., 1942	9,560	+ 3,885	52	90,370	78,050	+	12,320	1st Pref.	1½	5/3	2	Nil	
	Interoceanic of Mexico	483	21.1.43	ps. 278,700	+ ps. 50,200	3	ps. 853,200	ps. 899,000	+	45,800	5 p.c. Deb.	11½	5	8½	Nil	
	La Guaira & Caracas...	319	Nov., 1942	14,771	+ 1,818	23	65,557	67,745	+	2,188	Ord. Stk.	6½	3½	5½	Nil	
	Leopoldina ...	382	31.12.42	6,331	+ 1,884	52	188,496	145,834	+	42,662	Ord. Sh.	77½	3½	73½	6	
	Midland Uruguay	274	22.1.43	\$4,106,000	+ \$1,402,000	30	\$114,017,000	\$103,543,000	+	\$10,474,000	Pr. Li. Stk.	53	40	50½	11½	
	Nitrate	1,059	Dec., 1942	83,045	+ 6,346	27	497,667	432,542	+	65,125	Pref.	19½	5½	16½	Nil	
	Paraguay Central	100	Nov., 1942	c84,000	+ c31,000	22	c 320,000	c 244,172	+	c 75,828	Ord. Stk.	59	41	59½	3½	
	Peruvian Corporation	153½	17.1.43	37,750	+ 1,581	3	79,421	82,583	+	3,162	Ord. Sh.	41½	23½	35½	Nil	
	Salvador	160	Dec., 1942	5,683	+ 3,253	25	31,086	27,760	+	3,326	Ord. Stk.	8½	2½	7	Nil	
	San Paulo	1,346	23.1.43	56,594	+ 35,551	30	1,343,328	579,873	+	763,455	Ord. Stk.	—	—	—	—	
	Talca	73	Nov., 1942	1,372	+ 95	23	46,890	50,931	+	4,041	"	—	—	—	—	
	Uruguay Northern	17,039	21.1.43	831,600	+ 19,000	3	2,306,600	2,581,800	+	275,200	Ord. Stk.	16½	9½	16½	Nil	
Canada	Canadian Pacific	17,039	21.1.43	831,600	+ 19,000	3	2,306,600	2,581,800	+	275,200	Ord. Stk.	16½	9½	16½	Nil	
	India	Barsi Light	202	Oct., 1942	13,747	+ 255	30	106,747	101,002	+	5,745	—	—	—	—	—
		Bengal & North Western	2,090	Nov., 1942	264,975	+ 33,087	8	449,400	561,682	+	111,682	—	—	—	—	—
		Bengal-Nagpur	3,267	30.9.42	275,550	+ 17,775	26	5,085,678	4,788,758	+	296,920	Ord. Stk.	102½	88	102½	3½
		Madras & Southern Mahratta	2,939	10.9.42	248,700	+ 78,196	23	4,488,672	3,836,300	+	652,372	"	105½	87	107½	5½
Rohilkund & Kumaon		571	Nov., 1942	555,750	+ 5,072	8	115,950	99,909	+	16,041	"	—	—	—	—	
South Indian	2,402	30.9.42	185,811	+ 31,733	26	3,293,328	2,670,410	+	622,918	"	103½	88½	102½	4½		
Various	Egyptian Delta	607	20.10.42	13,364	+ 1,277	31	224,460	157,047	+	67,413	Prf. Sh.	5½	1½	4	Nil	
	Manila	277	Nov., 1942	40,498	+ 18,788	20	159,912	103,592	+	56,320	B. Deb.	44	35	42	8½	
	Midland of W. Australia	1,900	31.10.42	60,590	+ 13,668	31	1,833,420	1,542,694	+	290,726	Inc. Deb.	95	90	93½	6	
	Nigerian	13,291	5.12.42	796,375	+ 33,879	37	28,131,557	27,134,897	+	996,660	"	—	—	—	—	
	South Africa	4,774	Sept., 1942	1,380,155	+ 327,758	—	—	—	—	—	—	—	—	—	—	

Note. Yields are based on the approximate current prices and are within a fraction of ¼  
† Receipts are calculated @ 1s. 6d. to the rupee

Argentine traffic is given in sterling calculated @ 16½ pesos to the £  
\$ ex dividend